A Clinical Lecture ON GONORRHŒAL MALIGNANT ENDOCARDITIS.

Delivered at Guy's Hospital on Jan. 11th, 1896.

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GENTLEMEN,—You will remember that at our last clinical lecture I mentioned the case of a man in Stephen Ward who was thought to be suffering from recently developed endocarditis of his pulmonary valve. As now I can show you his heart his case will form an interesting subject for a clinical lecture. He was admitted into the hospital on Sept. 23rd, 1895, and his age was nineteen years. His family history was good and he had never had any illness before the present, except that four weeks previously he contracted gonorrhœa. For about a fortnight before he came in he had not been well, but on Sept. 14th he had four rigors, and between this date and his admission he had seven more, each lasting about twenty minutes and accompanied by much sweating, but he had not felt ill. On admission he looked rather anæmic, although he was well nourished. We examined him most thoroughly, and except for a few râles at the bases of the lungs and a slight blurring of his right optic disc every organ in his body appeared to be healthy. By Oct. 3rd, since he came in, he had had eight rigors, in which the temperature had exceeded 105° F. twice and had been over 104° four times. After a rigor there had been a rapid fall, often to as low as 96°, and apart from the rigors the temperature frequently varied several degrees in a few hours. He had profuse sweats and was rather more anæmic. The râles and the optic discs remained as they were and no fresh signs of any sort developed. It had been frequently noticed that when the temperature was high the pulse and respirations were not proportionately rapid, thus with a temperature of 105·6° the pulse was 108 and the respirations were 28. The patient's only complaint was that the rigors were disagreeable. He said that in between them he was perfectly well. On Oct. 5th for the first time a faint diastolic murmur was heard over the third left costal cartilage, and the next morning a faint systolic murmur could be heard there also; it was conducted a little upwards and to the left. On Oct. 29th the report stated that the temperature continued to fluctuate widely and irregularly, the patient had often had rigors, he had sweated much, and his splenic dulness had increased to beyond the normal limit. He remained anæmic, and the systolic and diastolic murmurs in the pulmonary area, though varying in intensity from day to day, had been constantly present. Sometimes there had been a little cough, but no fresh sounds had developed in the lungs; there was very little expectoration, but no tubercle bacilli could be found in it. Repeated examinations of the urine failed to reveal any abnormal condition. On Nov. 1st the urine contained a considerable amount of albumin, blood, blood casts, and epithelial cells. On the 9th all the symptoms previously mentioned persisted and the urine contained much blood; for the last few days he had suffered considerably from diarrhœa. On the 12th for the first time œdema of the face appeared, and lately many râles and rhonchi had been heard in the lungs. On the 19th the patient had become much worse, the œdema had become extensive and general, and the anæmia was now profound. Every day the urine contained much blood and the patient suffered from diarrhœa. The extensive fluctuations of temperature continued. Attacks of dyspnœa due almost certainly to uræmia were frequently noticed, and in the evening the patient died in one of them.

During the few days we saw this patient we had to think of all the various diseases from which a man who had high fever on admission might be suffering. The first thing to observe was that there was no sign of any of the shorter specific fevers such as scarlet fever or pneumonia, and, further, if the history was correct he had already had pyrexia too long for any of them, so we had before us the problem which is constantly perplexing us—namely, What is the matter with a patient who has long-continued pyrexia? Let us now try to answer this question according to our experience, and I think it certainly teaches us that we should always begin by trying to find out whether the patient can possibly have typhoid fever; we decided he had not, because although in typhoid fever the onset is occasionally sudden and accompanied by a rigor repeated rigors early in the disease are probably unknown. Very rarely you may see them about the end of the third or fourth week, but then they are usually due to some complication, as phlebitis, an abscess, or periostitis. Then, again, the wide and rapid variations of temperature this patient showed are very unlike typhoid pyrexia, in which the difference between the night and morning temperature is not commonly more than two or three degrees, unless it be in the third or fourth week, when, as I have often shown you, the temperature is very ataxic, probably because by then the controlling mechanism is thoroughly exhausted, but then the maximum attained is never 105·6°. Further, too, patients who have typhoid fever do not suffer from profuse sweats, the skin is usually moderately dry, and they commonly feel ill, but our patient sweated profusely and felt well. I need hardly add that we cross-questioned and examined him for all the ordinary signs of typhoid fever, such as headache, deafness, spots, characteristic tongue, enlarged spleen, and diarrhœa, with negative results.

The next thing you ought to ask yourself in such a case is, Has the patient a collection of pus somewhere? The type of temperature, the rigors, the sweats, and the anæmia were suggestive of this, and we examined him most carefully without finding any evidence of pus in any part of the body. Never forget in such cases to examine the rectum. You may find by that means an abscess in the prostate or in Douglas's pouch even when the patient complains of absolutely no symptoms pointing to it; also, always search the body carefully for a tender spot. I have detected a deep-seated suppurating hydatid by this sign only. Lastly never forget the ears and the teeth. Let me now remind you always, in any obscure febrile illness, to consider the possibility of influenza; bad mistakes have been made from forgetting this. We decided against it with our patient, for the duration, the frequency of the rigors, and the absence of prostration were all very unlike influenza, which, too, was not prevalent in September. Another very important malady always to have before you is acute miliary tuberculosis. This, you know, is a disease in which there is a very rapid development of innumerable grey tuberculous granulations in many parts of the body, especially in adults in the lungs. Generally speaking, infection takes place from some tuberculous matter already present in the body, such as a caseous gland or a caseous nodule in the lung. The onset is often sudden; rigors, profuse sweats, and a widely fluctuating temperature are commonly present from the first—all evidence that the toxæmia is very severe, and, indeed, the cases usually die within a month. But these grey granulations may exist two or three weeks before they cause any local symptoms, and, therefore, early in the case a diagnosis is often impossible, although the disease may be strongly suspected. In children the tubercles in the meninges often induce meningitis, and as soon as the signs of this are detected the diagnosis becomes easy; in adults the tubercles in the lungs are commonly the first to give signs, which they do by setting up bronchitis and patchy consolidation of the lungs. Some of you may remember a woman in Mary Ward whose temperature, rigors, and sweats were very like this man's, and it was not until after a fortnight that signs appeared in the lungs; these enabled us to make a diagnosis of acute miliary tuberculosis. She died within a month, and the diagnosis was found to be correct. Two symptoms that may help you before any pulmonary signs have developed are slight lividity and rapid respirations; also you will never forget to look for tubercles in the choroid, and even the blood may be examined. Unfortunately for diagnosis usually there is little or no expectoration till quite late in the case. Whilst we had fully before us the possibility that our patient might have acute miliary tuberculosis, on the whole we did not think it likely as we could find no local signs, although he had been ill for a fortnight. Malignant endocarditis, too, was discussed, and the rigors, the temperature, the sweats, and the anæmia were all very suggestive of it. But we could not diagnose it certainly, for there was no murmur, the heart appeared normal in all respects, there was nothing to point

to previous heart disease, and no source of infection could be found, for we did not learn till after the patient had been in hospital a few days that he had had gonorrhœa recently. We also discussed whether he might have phlebitis. This occurs—usually in the left femoral or saphena vein—after many diseases, particularly typhoid fever, pyæmia, and septicæmia, and in the lateral sinus after disease of the ear. Typhoid bacilli and streptococci have been detected in the clot. Its occurrence is often accompanied by rigors, sweats, and pyrexia, as I have seen in a case in which it followed typhoid fever; and you must remember that it may be met with after confinements and operations, even when it is the only evidence that septic processes have taken place, and sometimes in such cases the phlebitis begins in veins inside the pelvis. But we put this diagnosis aside in our patient, for not only were there no local signs in any part of the body, such as tenderness and swelling, but there was no pain, and acute phlebitis is almost invariably accompanied by severe pain, often agonising, and largely due, no doubt, to the stretching of the tissue caused by the rapid œdema of the parts which return their blood by the diseased vein. For instance, I have seen the calf of the leg double its circumference in a few hours; just think how painful that must have been. The next disease which passed through our mind was ague. Our patient's case would have been a very irregular example of this disease, which we easily put out of court as he had never been in a district where ague is prevalent. If he had we should have examined his blood for the plasmodium malariæ.

Some of you asked whether the temperature might be "neurotic." Quite a large number of cases are on record in which no organic lesion could be detected and the patient was not thought to be suffering from any known specific fever, but yet the temperature was raised. When these patients are obviously hysterical they are said to be suffering from hysterical fever, otherwise the pyrexia is by some called inexplicable and by others innominate. But do let me beg of you not to make this diagnosis hastily. You ought never to make it unless you have watched your patient a fortnight at least; it is so easy to overlook almost any of the diseases which we have already mentioned as causing long-continued pyrexia. So impressed am I with the great danger you run if you say a patient has this variety of pyrexia that I hardly ever talk about it at the bedside. We waited in the case of our patient, and the events showed what a bad mistake we should have made if we had not done so. The result, therefore, of our discussion during the first few days of the patient's stay in the hospital was that we felt we could not decide upon the cause of his pyrexia, and that, therefore, all that could be done was to try to maintain his strength and watch the course of events. On Oct. 4th a diastolic murmur was heard in the pulmonary area, and the next day a systolic murmur was also audible there. A hæmic murmur is never diastolic and a systolic murmur audible over the third left costal cartilage and conducted up to the left is, if not hæmic, significant of disease of the pulmonary valves, and therefore we concluded that this patient had endocarditis of his pulmonary valves. These murmurs were the very sign for which we had been waiting to complete our diagnosis of malignant endocarditis, which accordingly we now wrote up over the head of the patient's bed.

Malignant endocarditis is a disease in which specific micro-organisms carried by the blood-stream to the heart grow upon the endocardium—almost always that of the valves,—and inasmuch as they are carried to the heart by the veins they not infrequently cause malignant endocarditis of the right side of the heart, although it is not so common there as on the left; and I find that at Guy's Hospital we have one case a year of right-sided malignant endocarditis, and that for every four times the tricuspid valve is affected the pulmonary is implicated once. Even if in this patient we had not had the other signs of malignant endocarditis, such as pyrexia, rigors, and anæmia, the development of a murmur on the right side of the heart, neither hæmic nor congenital nor secondary to disease of the lung nor to disease of the left side of the heart, would have rendered malignant endocarditis almost certain. The importance of this has been exemplified only this week in the case of a man I saw outside the hospital who some weeks after the subsidence of an attack of pleurisy still has pyrexia, and while under the observation of his medical man has developed a loud to-and-fro tricuspid murmur which renders it almost certain that he has malignant endocarditis. The probability of this disease is still further increased when, as in our patient, the murmur was pulmonary, for although in very rare cases rheumatism may affect the tricuspid valve it always spares the pulmonary.

Having decided that our patient had malignant endocarditis of his pulmonary valve we had next to try to discover what was the cause of the malignant endocarditis. The micro-organisms which are found in cases of septicæmia and pyæmia are probably the most common cause of malignant endocarditis, and therefore it is met with as a complication of pyæmia, and Dr. Goodhart pointed out many years ago that when pyæmia is common cases of malignant endocarditis occur frequently. Puerperal cases are not uncommon; there was a very good example in No. 3 bed in Mary Ward a year ago. Often, however, in cases where after death streptococci and staphylococci are found on the valves, no source of infection can be discovered. We have had many instances of this during the last few years. The only other common cause of malignant endocarditis is pneumonia; indeed, in Osler's series this was responsible for it in 25 per cent. of his cases. In very rare cases it may follow erysipelas, and the bacilli of enterica, diphtheria, tubercle, anthrax, and the gonococcus have all been found to be the cause of malignant endocarditis, but in each of these cases the infection of the valves is relatively rare, but as gonorrhœa is such a common affection, although a very small proportion of the sufferers from it get endocarditis, a considerable number of cases have been recorded.[1] To this list influenza should be added, for I had under my care a patient whose malignant endocarditis appeared to follow this disease. When on Oct. 4th we decided that our patient had malignant endocarditis we went over all these causes and then I learnt for the first time that he had recently had gonorrhœa, and therefore we came to the conclusion that he had gonorrhœal malignant endocarditis affecting the pulmonary valve. Dr. Washbourn examined his blood for the gonococcus without success, but this micro-organism is difficult to detect in the blood. I will show you his heart and you will see that the pulmonary valve is extensively affected with recent malignant endocarditis; on one cusp of it there is a mass of vegetations the size of a pea, which has by its flapping caused an erosion on the pulmonary artery, and also ulceration and perforation of the contiguous pulmonary cusp. Mr. Pakes examined the vegetations for the gonococcus, and I believe found them, but unfortunately he is abroad, so we cannot obtain his report, but there is no reasonable doubt that the malignant endocarditis is gonorrhœal.

In the vast majority of cases in which the human subject is invaded by the gonococcus the effect is purely local in the urethra, but in a few cases the gonococcus after getting into the circulation produces inflammation of distant parts, usually the joints, and there is now in Stephen Ward one of the severest cases of gonorrhœal rheumatism I have ever seen; the affected joints are red and swollen, the pain is continuous, and the temperature high. Sometimes the micro-organism affects the pericardium producing pericarditis or the pleuræ producing pleurisy. The case is recorded of a girl aged eleven years who, after being raped by a man who had gonorrhœa, developed pleuritic effusion in which gonococci were found. Rare as gonorrhœal endocarditis is I am fortunate in being able to show you another specimen from our museum where also the pulmonary valves are affected. It is the heart of a man (who was under the care of Mr. Durham) who had gonorrhœa, and who died from the consequent malignant endocarditis; and to further demonstrate malignant endocarditis of the pulmonary valve I also show you the heart of a woman (who was under Dr. Pye-Smith) in whom it followed her confinement. You will easily see the extensive affection of the pulmonary valve.

There are one or two other points of interest about the case to which I should like to direct your attention. You will remember that the pulmonary murmur was to-and-fro. This of itself makes it highly improbable that it is congenital, for congenital pulmonary murmurs are almost always systolic only. We often noted that when the temperature was raised the pulse and respiration were not much increased. This is often the case with diseases in which the temperature in a few hours makes an excursion of many degrees, and I have noticed it in other cases of malignant endocarditis. It was also very striking that even when his temperature was 105° or more he did not seem to mind it and he remained mentally

[1] See the Medical Chronicle, vol. iv., No. 5, p. 362.

clear. This, too, you will often notice in the early stages of diseases characterised by these wide fluctuations of temperature. A very important point to which I wish to direct your attention is that during life this patient's urine contained albumin, blood, blood casts, and epithelial casts; his face was œdematous and he had attacks of dyspnœa very suggestive of uræmia. The kidneys were found to be large and pale; they weighed 18 oz.; there was much tubal nephritis, together with numerous petechial spots under the capsule. It is in my experience very common to find tubal nephritis with hæmorrhagic spots in malignant endocarditis, and it is by no means rare for the nephritis to give, as it did in this man, distinct evidence during life. Often, too, I think uræmia is the final cause of death in malignant endocarditis. Sometimes this kidney trouble quite overshadows the symptoms of endocarditis, as in a patient who was admitted under me with aortic murmurs and slight pyrexia. In a day or two the temperature fell and remained normal for four weeks, but the patient all this time had albuminuria, hæmaturia, diminished urea, a low specific gravity of his urine, and a hard pulse, so that we began to wonder whether we had not been wrong in supposing, as we did on his admission, that he had malignant endocarditis, and we were inclined to think that in addition to his aortic disease he had chronic Bright's disease. Subsequently the temperature rose again, but as at the same time he developed pleurisy the pyrexia was ascribed to this. He developed typical uræmic convulsions and died. He was found to have malignant endocarditis and large, pale kidneys, with much tubal change and numerous severe hæmorrhages in these organs.

Another point of importance is that the duration of malignant endocarditis is most variable. The patient may live only a few weeks or many months. For instance, in 1894 there was a woman in Mary Ward who was confined on June 17th. About July 12th she had her first rigor; her medical adviser detected endocarditis in August, and she died on Oct. 23rd—that is to say, about eighteen weeks after her confinement. Another case came into Mary Ward on Feb. 11th, 1891, with malignant endocarditis; the patient got well enough to go out, but returned to the hospital again with symptoms of the disease and died on Sept. 30th, eight months and a half after her first admission. In another case the malignant endocarditis dated from at least Sept. 10th, 1894, but the patient did not die till Jan. 3rd, 1895. These long-lasting cases raise the question whether the disease is recoverable. I know of no case in which a subsequent post-mortem examination has proved that this is possible, but from time to time patients who have every sign of the disease are discharged from the hospital apparently well. For instance, a woman was in Mary Ward with every symptom of malignant endocarditis after her confinement. She left apparently cured after three months' stay in the hospital, the murmur having entirely disappeared; and I once saw outside the hospital a patient who presented every sign of the disease, but who got quite well and was in excellent health many months afterwards. All that can be done in the way of treatment is to keep up the patient's strength by careful feeding and nursing and by rest in bed. If the temperature is not high and the anæmia profound iron may be given. Some writers consider that arsenic and quinine are useful.

ON DIARRHŒA IN MANCHESTER IN 1895, WITH SPECIAL RELATION TO INFANT FEEDING: A PRELIMINARY INVESTIGATION.

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DURING the autumn of 1895 the sanitary inspectors made a special inquiry into a number of circumstances connected with deaths ascribed to summer diarrhœa, and, although nothing new has been ascertained in regard to the disease, the application of the lessons to be derived from previous work still, in the main, remains to be made. Moreover, there are important details in connexion with the general conclusions previously arrived at which are susceptible of greater precision of statement and which require such precision. Further, as a preliminary to investigation of a more searching character, it is necessary not only to arrive at positive conclusions as to those features of the disease which offer the greatest chance of successful research, but also to make oneself acquainted with the difficulties and requirements attending this particular study. In his well-known inquiry into diarrhœa, published as a supplement to the report of the medical officer of the Local Government Board for 1887, Dr. Ballard, as the result of exhaustive analysis of a mass of statistical information, arrives at these conclusions.

1. The disease known as summer diarrhœa is a specific malady, that is to say, it has a definite individuality, and the term does not cover a multitude of affections, intercurrent incidences in different pathological states. In support of this contention, he adduces the striking renal changes, as well as the fatty degeneration of the liver invariably present in the fatal cases examined. He also points to the remarkably close manner in which the summer rise of diarrhœal mortality follows the indications of the four-foot earth thermometer, only commencing definitely when the reading is above 56° F., and attaining its maximum in the week in which the temperature recorded by that thermometer attains its mean weekly maximum. The inference which he draws from the connexion observed is that diarrhœa is probably due to bacteria in the superficial layers of the earth. Now, although the pathological changes in fatal cases are in themselves insufficient ground for such a conclusion, I agree with Dr. Ballard that the behaviour of summer diarrhœa, as a whole, points in this direction. Still, though this may be a just view, it cannot be regarded as more, at present, than a general impression gathered from the scrutiny of all the facts, needing confirmation, which can only come from a bacteriological quest for the supposed specific cause of the disease. But, if we accept Dr. Ballard's hypothesis, it would seem that his data warrant us in the same spirit in venturing further on the speculation that some light on the etiology of the presumed disease is to be gathered from contemplation of its epidemic course. We may suppose provisionally that the cause of summer diarrhœa is a specific micro-organism which is more susceptible to the influence of temperature than many of the other bacteria with which the superficial layers of the earth are crowded, and that, consequently, in the cold season it is overgrown and thrust downward into the deeper layers of the soil, where, we must further suppose, the conditions of life are more favourable to it than to the bacteria living generally on the surface. It must, further, possess the power of growing in organic solutions, such as are easily accessible for experiment. We may suppose that the rise of temperature in summer continues until such a temperature is reached in the deeper layers of the soil as starts the specific organism into copious growth, and that it then develops a general vigour of vegetative activity which soon enables it to reach the surface in masses, and so to find its way into the air. Now, if this is a reasonable explanation of the observed phenomena the proper end to begin with in an etiological inquiry into summer diarrhœa is not necessarily the human body, but rather the bacteriological history of different layers of the ground at different periods of the year. The bacterium or bacteria concerned in summer diarrhœa will certainly be found infinitely more abundantly in the superficial layers of the soil in the diarrhœal season than at other times, and may also, and probably will, be found in the non-diarrhœal season more abundantly in the deeper layers of the soil. By parallel lines of investigation on milk and on the contents of the bowels of children who have died from summer diarrhœa, it should be possible to find the specific cause of diarrhœa, supposing such to exist.

2. Excessive prevalence of diarrhœa is associated with the presence of insanitary conditions, especially with such as imply the presence of filth. Among such conditions especially are fouling of the soil, dirty houses, overcrowding, and imperfect circulation of the air in the rear of houses. It would appear, if we accept these conclusions, that the occurrence of diarrhœa is influenced partly by the condition, as regards general health, of the sufferers previous to the specific attack; and there is, indeed, ample evidence to this effect in other directions.

3. Fatal diarrhœa is immensely influenced by the food of which the infant partakes immediately before an attack. Indeed, so preponderating is the effect of feeding in producing fatal diarrhœa that it becomes a matter of prime importance in itself, as far as preventive medicine is concerned, independently of any speculation as to the etiology of diarrhœa. Dr. Ballard's hypothesis of the connexion of

food with the disease had better be given in his own words:—"That in food, inside of as well as outside of the human body, such micro-organism finds, especially at certain seasons, nidus and pabulum convenient for its development, multiplication, or evolution. That from food, as also from the contained organic matter of particular soils, such micro-organism can manufacture, by the chemical changes wrought therein through certain of its life processes, a substance which is a *virulent chemical poison*. That this chemical substance is, in the human body, the material cause of epidemic diarrhœa." It would appear from this that Dr. Ballard was inclined generally to ascribe the diarrhœal attack to chemical materials manufactured outside the body. I do not know on what this view, supposing him to hold it, is based.

When the inquiry into summer diarrhœa was begun in 1894 I was not acquainted with Dr. Hope's paper, nor until recently did I learn the full scope of the work which he did in connexion with infant feeding. I find that his investigations, which extended over several years, anticipate and in some respects go beyond those which I have instituted. I am, however, only the more convinced that further continued investigations are required into the subjects which he has very ably discussed, especially as immediate practical deductions can be, in all cases, drawn from local inquiries which will appeal to sanitary authorities. I have generally pursued the same line of inquiry as Dr. Hope had previously done, with the exception that I endeavoured to find a basis in the habits of infant feeding of the population generally, and that the inquiries were made through the sanitary inspectors. In this last respect the figures do not possess the value which those of Dr. Hope do, and they require to be tested by a comparison with those which he obtained by personal inquiry. I had, however, the more important parts of the inquiry overhauled by Dr. A. J. Tonkin, the resident medical officer at Clayton Vale Hospital, Newton Heath. They are in general accord with Dr. Hope's results and therefore possess an added value. It is clearly of much value to ascertain what are the facts as regards infant feeding, since much may be done both as regards the quality of food supplied to children and also in educating the public in the precautions necessary to prevent children from partaking of contaminated food. In fact, assuming the correctness of Dr. Ballard's views as to the etiology of diarrhœa, the two points to which attention should be more especially directed are (1) the purification of the ground if contaminated, and (2) the effectual killing of disease germs in the milk at as early a period as possible, and again before consumption.

In order to ascertain what is the relative degree of danger to breast-fed and artificially-fed infants respectively of dying from summer diarrhœa at early ages I have drawn up a statement from the inspectors' inquiry forms showing the ages and modes of feeding for each month of age under twelve months, 500 consecutive deaths from diarrhœa in August and September being used for this inquiry.

There died altogether at the following ages:—Under 1 month, 12; 1 month, 36; 2 months, 43; 3 months, 47; 4 months, 37; 5 months, 38; 6 months, 30; 7 months, 21; 8 months, 27; 9 months, 30; 10 months, 31; 11 months, 21; 12 months, 13; and over 12 months, 114; total, 500.

Of these the following were being breast-fed when taken ill:—Under 1 month, 1; 1 month, 2; 2 months, 3; 3 months, 3; 4 months, 1; 5 months, 2; 6 months, 0; 7 months, 0; 8 months, 1; 9 months, 0; 10 months, 2; 11 months, 0; and 12 months, 0.

The following were being partly suckled and partly artificially fed:—Under 1 month, 2; 1 month, 7; 2 months, 4; 3 months, 10; 4 months, 8; 5 months, 6; 6 months, 7; 7 months, 5; 8 months, 5; 9 months, 6; 10 months, 4; 11 months, 6; and 12 months, 5.

Now, in order to ascertain what degree of risk of death from diarrhœa children are running in the first twelve months of life it is necessary—as, indeed, Dr. Hope remarks in his paper—that a basis of comparison should be obtained by ascertaining what proportion of all children are being fed on the breast at different ages. Such an inquiry was made on a form provided for the sanitary inspectors. Before they commenced filling in their returns I made some inquiries personally, which satisfied me that the chief difficulty they would have to encounter would be that the parents would loosely answer that the children were being breast-fed when they were really being in part fed by hand, and they were consequently warned to be careful to avoid this source of fallacy. They were instructed further to select districts in which fatal diarrhœa was rife, and to take the history of the youngest children living under three years of age, and, if the last child had died, to take the history of that child instead. This statement, therefore, represents the habits of all the poorer districts in the city of Manchester. In spite of the warning given their papers convey the impression that they had in some instances failed to appreciate its necessity and importance. Another inquiry, relating to 400 children, instituted by Dr. Tonkin at my request, and to 50, which I personally made, is taken as the basis of a comparative statement. First, then, as to the inspectors' returns.

1. The numbers of children living at or to different ages to whom the particulars of infant feeding relate are as follows:—Under 1 month, 5; 1 month, 20; 2 months, 26; 3 months, 32; 4 months, 27; 5 months, 32; 6 months, 23; 7 months, 29; 8 months, 39; 9 months, 39; 10 months, 32; 11 months, 23; 12 months, 38; and over 12 months, 635; total, 1000.

2. Of the above the following were never fed entirely at the breast:—Under 1 month, 0; 1 month, 2; 2 months, 4; 3 months, 6; 4 months, 3; 5 months, 4; 6 months, 0; 7 months, 5; 8 months, 6; 9 months, 3; 10 months, 5; 11 months, 4; 12 months, 9; and over 12 months, 55; total, 106.

3. Of those enumerated in No. 2 the following were fed partly at the breast up to the following ages:—Under 1 month, 0; 1 month, 0; 2 months, 3; 3 months, 2; 4 months, 1; 5 months, 1; 6 months, 0; 7 months, 1; 8 months, 5; 9 months, 0; 10 months, 3; 11 months, 2; 12 months, 4; and over 12 months, 13; total, 35.

Of 894 children out of 1000 fed entirely at the breast for varying periods the following are the numbers at different ages breast-fed, practically entirely, up to the understated periods, those breast-fed up to higher ages not being included in the figures at any given age:—Under 1 month, 43; 1 month, 54; 2 months, 47; 3 months, 72; 4 months, 48; 5 months, 50; 6 months, 82; 7 months, 30; 8 months, 49; 9 months, 89; 10 months, 56; 11 months, 31; 12 months, 122; and over 12 months, 121; total, 894.

Of these the following had just reached the ages above given, and were, therefore, still being breast-fed except those who had died:—Under 1 month, 5; 1 month, 20; 2 months, 18; 3 months, 20; 4 months, 17; 5 months, 20; 6 months, 19; 7 months, 13; 8 months, 16; 9 months, 23; 10 months, 14; 11 months, 6; and 12 months, 9; total, 200.

The above figures may be presented in the following convenient shape. Out of 1000 children there are fed on the breast up to the commencement of the following ages:—1 month, 851; 2 months, 797; 3 months, 750; 4 months, 678; 5 months, 630; 6 months, 580; 7 months, 498; 8 months, 468; 9 months, 419; 10 months, 330; 11 months, 274; 12 months, 243; and over 12 months, 121.

The following were not entirely fed on the breast at the entrance to the respective ages:—One month, 144; 2 months, 178; 3 months, 199; 4 months, 239; 5 months, 260; 6 months, 278; 7 months, 337; 8 months, 338; 9 months, 348; 10 months, 398; 11 months, 422; 12 months, 430; and over 12 months, 514.

If, now, such a number of diarrhœa inquiries were to hand as to enable us to get a sufficient number of deaths from breast-fed children in each month of life, we should be able to obtain an estimate of the influence of artificial feeding in the various early months of life. Thus referring to the figures relating to diarrhœa mortality, we see that the chance of death by summer diarrhœa under the age of one month in the infant fed by hand, wholly or in part, is to the chance of death of the breast-fed child at the same age at least $\frac{11}{1} \times \frac{851}{144}$. That is at least 65 to 1. Similarly the chance of death from summer diarrhœa at the age of one month in the two classes is $\frac{34}{2} \times \frac{797}{178}$. That is at least 76 to 1. The same calculation can be made all the way through the months, failing, of course, on account of the paucity of deaths in breast-fed infants at higher months.

It has been mentioned that a corresponding calculation was made as regards infant feeding of 450 cases, the inquiry as to whom was conducted with a rigorous effort to exclude the fallacy mentioned. In this the number of infants fed entirely on the breast diminishes much more rapidly in the higher months of life than it does in the above statement, and the odds, therefore, against hand-fed children at the more

advanced months of life are much smaller. Nevertheless, it is manifest from both calculations that, especially in the earlier months of life, artificial feeding plays a most important part in bringing about the fatal result, though it is probable that more extended figures would show that this effect rapidly diminished with each month of life, especially in infants partly suckled. Such, indeed, is the conclusion to which Dr. Hope's figures also point, though, even in the absence of inquiries into deaths from diarrhœa in sucklings sufficiently numerous to afford a complete calculation of probabilities, I have thought it worth while to give the method by which a complete statement of the fatality resulting from a complex of causes may be exhibited. If we take the three-month periods used by Dr. Hope, then for every death in a breast-fed child, well over 53 would occur amongst children under three months in an equal number of children hand-fed, wholly or in part. In the same way, from three to six months, well over 40 deaths occurred among children hand-fed, wholly or in part, to one among sucklings out of the same number. But, as I have said, the figures are insufficient, and the disproportion is in reality greater than the above figures indicate.

This subject may be attacked in another and more satisfactory way. The method of calculation followed above does not lend itself so readily to the estimation of the relative chances of partially suckled children and of children entirely breast fed or entirely hand fed, and it is desirable to be able to form some estimate of the influence of partial suckling. The calculation may be made in the following manner, which, however, is to be taken, along with that just given, rather as a device for utilising to the utmost the materials derived from a house-to-house inquiry than as a complete answer to the question, What are the relative chances of death at different ages of breast-fed, hand-fed, and partially suckled infants? The months of life lived, *at each month of life*, by each of the 450 children whose habits of feeding were inquired into by Dr. Tonkin and myself are excerpted and recorded, and the following results are obtained by simple addition. These 450 children, who, be it remembered, were many of them three years old, and a number of whom had died, lived the following number of months of life at the months of life hereunder:—

1. Entirely hand fed:—Under 1 month, 34; 1 month, 36; 2 months, 46; 3 months, 53; 4 months, 54; 5 months, 52; 6 months, 54; 7 months, 55; 8 months, 53; 9 months, 62; 10 months, 67; 11 months, 73; and 12 months, 93.

2. They lived the following months of life, partly breast fed and partly hand fed:—Under 1 month, 23; 1 month, 23; 2 months, 45; 3 months, 69; 4 months, 77; 5 months, 95; 6 months, 163; 7 months, 172; 8 months, 189; 9 months, 196; 10 months, 194; 11 months, 184; and 12 months, 152.

3. They lived the following months of life, at the following ages in months, having no other food than the breast:—Under 1 month, 390; 1 month, 333; 2 months, 288; 3 months, 265; 4 months, 238; 5 months, 148; 6 months, 115; 7 months, 90; 8 months, 51; 9 months, 31; 10 months, 20; and 11 months, 10.

Now it will be remembered that the deaths were as follows of the 500 cases of diarrhœa investigated:—

4. Among the hand-fed at ages in months they were as follows:—Under 1 month, 9; 1 month, 27; 2 months, 36; 3 months, 34; 4 months, 28; 5 months, 30; 6 months, 23; 7 months, 16; 8 months, 21; 9 months, 24; 10 months, 25; and 11 months, 15.

5. Among the partly suckled and partly breast-fed they were as follows:—Under 1 month, 2; 1 month, 7; 2 months, 4; 3 months, 10; 4 months, 8; 5 months, 6; 6 months, 7; 7 months, 5; 8 months, 5; 9 months, 6; 10 months, 4; and 11 months, 6.

6. The figures for the entirely breast fed were as follows:—Under 1 month, 1; 1 month, 2; 2 months, 3; 3 months, 3; 4 months, 1; 5 months, 2; 6 months, 0; 7 months, 0; 8 months, 1; 9 months, 0; and 10 months, 2.

In calculating from these figures the relative chances of dying from summer diarrhœa in the three classes, the assumption is made that the first three sets of figures given above are a fair representation of the relative numbers of children living at those ages who are being respectively hand-fed, partially breast-fed, and entirely breast-fed. This assumption is open to the objection of the paucity and partiality of the number investigated. But otherwise I think it may be accepted, and this method of inquiry has one advantage in affording the observer an opportunity of inquiring into the effects of hand feeding on the living. The figures are thus used:—

The chance of a hand-fed child dying in the first month of life of summer diarrhœa is to that of a child partially suckled as $\frac{9}{2} \times \frac{23}{34}$—i.e., 3 to 1.

In the second month of life the chance is $\frac{27}{7} \times \frac{23}{36} =$ over 2 to 1.

In the third month	$9 \times \frac{46}{45}$	.....	Nearly 9 to 1.
In the fourth month	$\frac{34}{10} \times \frac{69}{53}$	.....	Over 4 to 1.
In the fifth month	$\frac{20}{8} \times \frac{77}{54}$	.....	„ 3·5 to 1.
In the sixth month	$\frac{5}{1} \times \frac{95}{52}$	.....	„ 9 to 1.
In the seventh month	$\frac{23}{7} \times \frac{163}{54}$	.....	„ 10 to 1.
In the eighth month	$\frac{16}{5} \times \frac{172}{55}$	.....	„ 10 to 1.
In the ninth month	$\frac{21}{5} \times \frac{189}{53}$	.....	Nearly 15 to 1.
In the tenth month	$\frac{24}{6} \times \frac{196}{31}$	.....	„ 13 to 1.
In the eleventh month	$\frac{25}{4} \times \frac{194}{67}$	.....	„ 18 to 1.
In the twelfth month	$\frac{15}{6} \times \frac{184}{73}$	.....	„ 6 to 1.

Now the mere statement of these figures shows that there is something very incomplete about the facts obtained, and points to the necessity for a much more extended and rigorous inquiry in future. If in the same way we compare the chances of dying of partially-suckled children compared with those entirely breast-fed we find that the numbers are, at the different months of life, as follows:—Under 1 month, 40 to 1; 1 month, 50·5 to 1; 2 months, 8·5 to 1; 3 months, 12·8 to 1; 4 months, 24·7 to 1; and 5 months, 4·7 to 1.

Similarly a comparison between entirely hand-fed and breast-fed children gives the following extraordinary chances:—Under 1 month, 138 to 1; 1 month, 125 to 1; 2 months, 75 to 1; 3 months, 57 to 1; 4 months, 123 to 1; and 5 months, 43 to 1.

The irregularities which occur in these figures are, of course, due to the comparatively small number of deaths in each instance. Curiously enough, the chances which appear too extremely unequal—viz., the last, where hand-fed children are compared with breast-fed children—are precisely those into which the least amount of error enters. Indeed, a partial revision of the inspectors' returns showed that they had over-stated the number of children dying from diarrhœa who were being suckled, and, on the other hand, the number of months lived by children fed on the breast alone is rigorously given. It might be supposed that in a house-to-house visit the infants of out-workers would be overlooked and that the basis of reasoning would be to that extent defective. Such is not the case. It is true that many houses are closed, but the infant has been transferred to the care of a neighbour who is at home. Another source of fallacy would be the overstating of the amount of breast feeding in the early months of life. That, however, is not the case so far as the population chosen was concerned, because in the early months of life the inspectors' inquiries agree with those made by Dr. Tonkin and myself in bringing out an altogether unexpected proportion of children fed entirely on the breast. It is true the relative incidence on hand-fed children is greatly in excess of Dr. Hope's results. It does not, therefore, follow that it is so wide of the mark as might at first blush be inferred. We may profitably compare with these figures the following extract from a paper by Mr. William Berry in that number of the *Liverpool Medico-Chirurgical Journal* which contains Dr. Hope's paper—viz., vol. vii., 1887. Quoting from the *Medical Press and Circular*, vol. ii., 1882, pp. 336 and 337, he refers to M. Tarnier as saying:—"Artificial feeding has been tried in Paris with very disastrous results, as may be seen by the following statistics drawn up by M. Bertillon. In 1881 60,856 children were born in Paris, of whom 14,571 were sent away to be nursed, while 42,285 remained in the city. Of the latter number 10,180 died, being a mortality of 22 per cent., while 5202 of the former, nearly one half, died of athrepsy—that is to

say, bad feeding. Of these 5262, 3057 were fed with a nipple bottle."

Proceeding as above we find that the following are the number of months of life lived by 1000 children inquired into by the sanitary inspectors at the following ages, and under the following conditions of feeding:—

7. Of infants entirely hand-fed:—Under 1 month, 78; 1 month, 96; 2 months, 104; 3 months, 109; 4 months, 115; 5 months, 118; 6 months, 124; 7 months, 120; 8 months, 119; 9 months, 138; 10 months, 154; and 11 months, 161.

8. Of infants partly suckled and partly hand-fed:—Under 1 month, 33; 1 month, 37; 2 months, 32; 3 months, 84; 4 months, 105; 5 months, 106; 6 months, 164; 7 months, 168; 8 months, 173; 9 months, 187; 10 months, 194; and 11 months, 185.

9. Of infants entirely suckled:—Under 1 month, 766; 1 month, 675; 2 months, 627; 3 months, 555; 4 months, 507; 5 months, 456; 6 months, 376; 7 months, 345; 8 months, 297; 9 months, 208; 10 months, 152; and 11 months, 121.

A calculation made from Paragraphs 4, 5, 6, 7, 8, and 9 in the same manner as before gives as follows the chance of a hand-fed child as against a partially suckled child dying from diarrhœa at the undermentioned months of age:—Under 1 month, 1·9 to 1; 1 month, 1·5 to 1; 2 months, 4·5 to 1; 3 months, 2·6 to 1; 4 months, 3·2 to 1; 5 months, 4·5 to 1; 6 months, 4·4 to 1; 7 months, 4·5 to 1; 8 months, 6·1 to 1; 9 months, 5·4 to 1; 10 months, 7·8 to 1; and 11 months, 2·9 to 1.

The relative chance of dying of partially suckled as compared with entirely breast-fed children is similarly at ages in months:—Under 1 month, 46 to 1; 1 month, 64 to 1; 2 months, 16 to 1; 3 months, 22 to 1; 4 months, 38·7 to 1; and 5 months, 13 to 1.

Of hand-fed as compared with breast-fed the chances are:—Under 1 month, 88 to 1; 1 month, 95 to 1; 2 months, 72 to 1; 3 months, 58 to 1; 4 months, 123 to 1; and 5 months, 58 to 1.

In considering the part that feeding plays in the causation of diarrhœal mortality we have to allow for various factors. The fatality may be due solely to bacteriological changes in the food stuff and may have no reference to previous conditions in the infant. It may, on the other hand, depend on previous enfeeblement of the child. The unquestionable influence of feeding may in itself be due not merely to bacteriological causes—that is to say, to direct infection—but may largely consist in a weakening of the constitution of the infant by defective assimilation. In the endeavour to deal practically with the terrible fatality from diarrhœa it is just as essential to consider these points as it is in the case of tuberculosis. Now an answer, which in time I hope to make more complete, is forthcoming to both these inquiries. Previous enfeeblement does play a very large part in the production of diarrhœa, whether from specific disease or otherwise. Moreover, the effect of artificial feeding in the production of such enfeeblement is a marked one. And, first, as regards the connexion between fatal diarrhœa and previous bad health this may be succinctly set forth in these figures.

Of the 500 fatal cases in the following at different ages the attacks were not preceded by other illness:—Under 1 month, 12; 1 month, 15; 2 months, 18; 3 months, 14; 4 months, 19; 5 months, 16; 6 months, 13; 7 months, 12; 8 months, 11; 9 months, 22; 10 months, 14; 11 months, 14; 12 months, 9; and over 12 months, 58; total, 247.

If we subtract these figures from the total deaths at different months we find that the following numbers were suffering from previous conditions of bad health when attacked:—Under 1 month, 0; 1 month, 21; 2 months, 25; 3 months, 33; 4 months, 18; 5 months, 22; 6 months, 17; 7 months, 9; 8 months, 16; 9 months, 8; 10 months, 17; 11 months, 7; 12 months, 4; and over 12 months, 56; total, 253.

Amongst the conditions specified are 36 cases of feebleness from birth, 11 of phthisis, and 20 of other illnesses, such as thrush, whooping cough, measles, &c. In 138 instances the mothers ascribed the illness to teething, and the above summary relates almost entirely to the causes to which they ascribed the attack. Of these 138 cases, 53 occur amongst those in which the illness is given as preceded by bad health, and 85 amongst those in which it is described as occurring in previously healthy children. Leaving teething out of account—as to which it may be said that the influence of this condition in producing fatal diarrhœa cannot be dismissed as *nil* if we consider the irritation and distress to which it often gives rise, but, on the other hand, would require a laborious and difficult investigation to determine—we find that rather more than half the infants were in bad health previously to the diarrhœal attack. We must, therefore, admit that fatal diarrhœa is influenced by the previous health of the child.

An answer to the question, Does infant feeding produce a condition of health predisposing to fatal diarrhœa? may, *pro tanto*, be given from Dr. Tonkin's return. But before considering this I here insert a statement which he has made for me of the habits of the people in regard to infant feeding (which might be supplemented by a summary of the inspectors' observations of the manner in which children who died from diarrhœa were being fed), and by tables exhibiting the subsequent history as regards suckling of children fed up to one, two, three months, &c., entirely fed on the breast. Such tables are clearly necessary to furnish us with a complete numerical idea of the extent to which children are fed at the breast.[1] Dr. Tonkin reports as follows on his observation of the habits of mothers in feeding their infants.

"*Infant Feeding.*

"I find that infants at very early ages are fed on dry bread, bread-and-butter, bread-and-milk, on the various patent foods found in the market, on rusks, biscuits, sago, tapioca, arrowroot, baked flour, oatmeal, cornflour, barley, potatoes, beef-tea, mutton-broth, gruel, rice, or on portions of any food which the rest of the family happen to be taking. In one house I saw a five months' old child being fed on haddock. Some mothers have a partiality for bread crusts (called 'tops and bottoms') softened by boiling either in water or milk. Many of these foods are given dry and in their natural state, while others are mixed with water, milk, or gravy. In no instance did I find that the mother's milk was supplemented with cow's milk alone. This latter when used is always in conjunction with some of the articles of diet mentioned above. While the child is being suckled, cow's milk is often avoided both in its pure state and in admixture with solid food, because mothers think that their milk and that of the cow do not agree. I find that all children who attain to ages above eight or nine months without receiving some form of artificial food do so because they refuse to accept any kind of food as long as the mother's milk is available. This also applies to a great number of children who would otherwise be hand-fed at very much earlier periods than is found to be the case. Mothers have various methods of finding the correct time for giving their children some form of solid food, such as when a child holds out its hands to grasp the food which the mother is taking or when a child is able to hold a crust firmly in its hands. The most frequent cause of early hand-feeding—at least by young mothers—is the advice of some aged relative (female) or of some neighbourly old woman. The period at which solid food may be begun is never calculated from a knowledge of what is right. A very prevalent belief is that by the time a child has reached the age of four or five months the mother's milk is not produced in sufficient quantity to satisfy it. If a child is robust the mother thinks that it requires some solid food to maintain its strength, and that it would die of starvation if left on milk alone. Again, if the child is weakly she thinks that solid food is necessary to give it strength. I was told of one child who was weaned when two weeks old. It was then fed on boiled barley without any addition of milk. This child died from diarrhœa when six weeks old. The mother stated that this method of feeding was advised by her medical man. I was often told that medical men had advised early feeding with solid food, which generally was to consist of some patent infants' food or bread-and-milk. Children are often allowed to suckle until they wean themselves, or until the mother again becomes pregnant. Prolonged suckling is often maintained because the mother thinks that she cannot become pregnant as long as she has a child at the breast. There is just as much ignorance of the correct time for weaning as there is of the correct time for feeding. I found one mother who suckled her child for twenty-one months and weaned it on the day she was confined of a second child. I find that the incidence of rickets and other constitutional diseases is entirely amongst the artificially fed children, even when this is in conjunction with the mother's milk. Undoubtedly all the most robust

[1] These are not inserted, as they are implicitly contained in the statements showing the number of months of life lived under different conditions of feeding.

of the children I saw are such as attain ages above nine months without having received any form of artificial food. I find that most mothers are perfectly ignorant of the fact that milk alone is the natural food of children under twelve months. In the case of many of the women whom I saw, this ignorance combined with prejudice and the fact that they have seen fine artificially fed children, made it almost impossible to instil into them a knowledge of the best mode of feeding their infants. All these remarks apply to the very poor as well as to the educated and better classes."

Summary of Return on Infant Feeding.

Of the 400 children in his return, Dr. Tonkin found that only 32 had been entirely hand-fed; of these, 14 had died at the following ages and from the following specified causes:—1 month, from "wasting"; 5 months, from pneumonia; 8 months, from "wasting"; 2 months, from "wasting"; 21 months, from phthisis; 13 months, from diarrhœa; 5 months, from diarrhœa, 14 months, from pneumonia; 5 months, from consumption of the bowels; 6 months, from consumption of the bowels; 2 months, from inflammation of the bowels; 4 months, cause unknown; 4 months, cause unknown; and 4 months, from consumption of the bowels. The following conditions of bad health were noted in the remainder at the ages given:—25 months, rickets; 22 months, rickets and bronchitis; 29 months, rickets; 30 months, rickets; 24 months, rickets; 11 months, phthisis; 24 months, rickets; and 18 months, rickets. Thus 8 out of the 18 survivors were in bad health.

Of children fed entirely on the breast up to the time of his visit, or who had died, he came across the following:—Under 1 month, 0; 1 month, 12; 2 months, 9; 3 months, 4; 4 months, 3; 5 months, 7; 6 months, 4; 7 months, 1; 8 months, 4; 9 months, 1; 10 months, 1; 11 months, 1; 12 months, 1; and over 12 months, 2; total, 50. Of these, 16 died at the following ages from the causes given:—At 1 month, from pneumonia; at 1 month, from bronchitis; at 1 month, from convulsions; at 2 months, from diarrhœa; at 2 months, from convulsions; at 2 months, 3 months, and 3 months respectively, cause not known; at 4 months, from bronchitis; at 5 months and 6 months, from pneumonia; at 7 months, from hydrocephalus; at 9 months, from pneumonia; at 11 months and 15 months from measles; and at 15 months from bronchitis after measles.

I have said that the definition of "breast-fed alone" was very rigorously construed, and to this list should be added the following at the ages specified who were breast-fed alone up to within a month of the age given, and who were still being breast-fed partially, probably almost entirely:—2 months, 3; 3 months, 3; 4 months, 2; 5 months, 2; 6 months, 6; 8 months, 2; and 10 months, 1: total, 19. Of these 2 died: 1 aged 3 months from convulsions; the other aged 6 months also from convulsions. Thus of 69 infants fed practically entirely on the breast 18 died, but in not one of the remainder was any condition of bad health observed. It will also be observed that affections of the bowels figure much more prominently among the causes of death in artificially fed infants, and a scrutiny of these causes makes it probable that a more extended inquiry would show a much greater predominance of mortality amongst that class.

The following were partly hand fed from birth up to the under-mentioned ages:—2 months, 3; 6 months, 1; 7 months, 1; 8 months, 1; 9 months, 2; 11 months, 3; 12 months, 2; and over 12 months, 3; total, 16. Of these 1 aged 2 months was suffering from rickets, and 1 aged 9 months died from eczema.

Of children fed entirely on the breast up to the age of 1 month and not previously mentioned there were 37 at the following ages:—4 months, 2; 5 months, 4; 6 months, 2; 9 months, 1; 10 months, 2; 11 months, 3; 12 months, 3; and over 12 months, 20; total, 37. Of these 22 continued to be partially suckled for some time, and of the 22 1 aged 17 months suffered from rickets, 1 aged 21 months had died from diphtheria, 1 aged 10 months from pneumonia, and 1 aged 6 months from consumption of the bowels. Of the remaining 15, 1 aged 15 months had rickets, as also had 1 aged 12 months; and 4 had died, 1 aged 11 months from diarrhœa, 1 aged 4 months from diarrhœa, 1 aged 10 months from diarrhœa, and 1 aged 6 months from wasting disease. Altogether, of the 37, 3 had rickets and 7 died; 1 infant fed for a fortnight at the breast and then hand fed died when 6 weeks old from diarrhœa.

Of children fed at the breast up to 2 months and not otherwise mentioned there were 32. Of these 26 were partially suckled afterwards, mostly for long periods: of whom 1 aged 24 months, partially breast fed up to 12 months, died from measles; one aged 11 months, partially breast fed up to 3 months, from diarrhœa; and 1 aged 13 months, partially breast fed up to 3 months, from wasting disease. Of the remaining 6, 1 aged 36 months has rickets and 1 aged 14 months died after injury.

Of breast-fed alone up to 3 months, not otherwise mentioned, there were 13, of whom 9 continued to be partially suckled. Of these 1 died aged 10 months from wasting disease. Of the remaining 4, 1 aged 27 months has rickets, 1 aged 9 months died from pneumonia, and 1 aged 8 months died from croup.

Of breast-fed alone up to 4 months, &c., there were 22 of whom 18 continued to be partially suckled. Of these 18, 8 died as follows: at 15 months, 9 months, 11 months, and 12 months respectively from convulsions; at 22 months and 10 months from measles; at 34 months from scarlet fever; and at 24 months from wasting disease. Of the remaining 4 none died.

Of infants entirely breast-fed up to 5 months there were 77, all of whom continued for some time to be partially breast-fed. Of these 11 had died—viz., at 15 months, 13 months, and 20 months respectively from consumption of the bowels: at 11 months, from convulsions; at 13 months, from bronchitis; at 34 months, from pneumonia; at 33 months, ? cause of death; at 33 months, 30 months, and 20 months, from diphtheria; and at 17 months, from diarrhœa. One aged 13 months had rickets.

Of those breast-fed up to 6 months there were 22, all of whom continued to be partially suckled; 3 died—viz., 1 aged 10 months from convulsions; 1 aged 10 months from pneumonia; and 1 aged 15 months from consumption of the bowels.

Of breast-fed up to 7 months there were 19, of whom 3 died: 1, aged 15 months, from convulsions; 1, 9 months, cause unknown; and 1, 12 months, from bronchitis.

Of breast-fed up to 8 months there were 32, of whom 31 continued to be partially suckled. Of the 31, 1 died, aged 21 months, from pneumonia, and the remaining 1, who did not continue to be partially suckled, died, aged 14 months, from diarrhœa.

Of breast-fed up to 9 months there were 12, of whom 11 continued to be partially breast fed. Of the 11, 2 died—1, aged 12 months, from diarrhœa, and 1, aged 18 months, from measles. The remaining 1 died, at the age of 16 months from convulsions.

Of those breast-fed up to 10 months there were 7, of whom 6 continued to be partially breast fed. None died.

Up to 11 months there were 6, all of whom continued to be partially breast-fed. None died.

Of breast-fed up to 12 months there were 2, of whom 1 had ceased to be breast-fed. This one died, at the age of 33 months, from pneumonia.

Of breast-fed for periods of more than 12 months there were 4, none of whom died.

None of the children living, it will be observed, who had been fed on the breast up to 6 months, and who are enumerated in the last eight paragraphs, to the number of 92, were found to be suffering from any unhealthy condition, such as rickets or phthisis. There is thus manifest a predominance of mortality in infants fed artificially, though this is not so marked as we might have expected. But there is no mistaking the influence of hand-feeding in producing conditions of bad health in the survivors. An examination of the causes of death indicates also that these causes are different in the two classes. Hand-fed children are far more liable to death from diarrhœa and tuberculosis, as might be expected. It is observable—probably quite accidentally—how much more fatal measles is in sucklings than among hand-fed children.

Connexion of Fatal Summer Diarrhœa with Fouling of the Ground.

As regards the concurrence of fatal summer diarrhœa and marked insanitary conditions in or about the houses the figures show that this is unmistakable. Anyone, however, who has had much experience of practice must be aware that the connexion between diarrhœa and such conditions is by no means so intimate, and that, in a very large number of instances indeed, severe attacks of diarrhœa occur where no discoverable insanitary conditions exist. But it looks as though some tie holds together fatal diarrhœa and such

insanitary conditions. So far as the inspectors' observations extend, the most intimate relation is that between fouling of the ground and fatal diarrhœa. Out of 500 deaths, in 422 the condition of the privy was noted. Amongst these 176 pails were used not observed to be defective, though in many of these I have no doubt that the ground was wet with urine. In 60 more no defect was noted, though the closet was against the house wall. In 44 the pail closet was defective, and the ground was consequently soaked, though the closet was not against the wall of the house. In 42 the pail closet was against the wall of the house and defective, so that the ground and walls were both soaked with foul liquid. In all there were 322 pail closets, of which 86 were noted to be defective—over one-quarter, that is, were in such a state that the ground was fouled. Of deaths in houses provided with middens there were 93, of which 20, or over one-fifth, were against the walls of houses. Of water-closets there were altogether 33. When I add that the middens are not in any way constructed so as to prevent soakage into the soil, and that there are only about six times as many pails as middens, the mere statement is sufficient to show how disastrous such a condition of things is and must be.

It is obvious that defective ventilation must add much to the deleterious effect of the soil fouled to the extent just stated. It is therefore of interest to note in what proportion of the cases the space at the back of the houses is small. We find that in 49 of the cases in which the closet is defective or the privy is a midden, the yard is small, and in 51 more it is both small and confined. In addition there are 79 instances in which the back yard is small, and 40 more in which it is both small and confined. In 25 out of the 79 cases the pail closet abuts on the house, and the same is the case with 17 out of the 40. As I have already stated, even when no record is made to that effect it is safe to assume that in a large number of these cases the ground is fouled. Thus, in 219 instances the ventilation at the back of the houses is defective. In a number of other cases the yard flags are broken, and the ground is in that way exposed to pollution.

Enough, therefore, has been stated to suggest that an intimate relation exists between the incidence of fatal summer diarrhœa in Manchester and the condition of the soil. The returns made by the inspectors do not show any such close connexion between insanitary internal conditions and this disease.

I do not propose to use this analysis further at present, although there are other points in connexion with the disease which it helps to elucidate, or at the least to supply hints in regard to, but will content myself with pointing out that there are two points at which the link of causation may be successfully broken by sufficient care—viz., the polluted ground near houses and the contaminated food which infants receive.

To resume, this paper offers a small and imperfect contribution (1) to the direction in which bacteriological investigation is most likely to be of value, and (2) to the way in which a sufficiently extensive house-to-house inquiry into the manner of feeding children not too old for the memory of the parents to have become dim with respect to particulars, may be rendered useful, not only in tracing the effects of infant feeding, but also, by a little device, in forming a basis for the precise estimate of the effects of feeding in regard to any particular disease. I propose, however, to attack the subject as soon as possible in a different and more complete fashion.

Manchester.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, MARYLEBONE.—The annual meeting of the governors and subscribers of this charity was held on Monday, at the hospital, Dr. G. Bernard Brodie presiding. The committee reported that more patients had been relieved during 1895 than in any previous year since the hospital was founded in 1753, 1124 patients being treated in the hospital and 1370 at their own homes. The income amounted to £4530 0*s.* 11*d.*, but the expenditure was £5091 6*s.* 2*d.*, thus causing a deficit of £561 5*s.* 3*d.* on the year's working. An urgent appeal was made to meet this deficit, new annual subscriptions being especially solicited. Additional support was also much needed for the convalescent home at Kilburn. It was resolved to proceed with some necessary alterations and improvements to the hospital building.

NOTE ON THE

VENOUS MURMUR AS HEARD IN THE CHEST: A PRACTICAL POINT.

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ONE of the most striking facts in connexion with the familiar venous hum of the root of the neck is the sudden disappearance of the bruit when the stethoscope is removed from the interval between the two heads of attachment of the sterno-mastoid and is placed over the sterno-clavicular joint. This want of conduction from the neck into the chest, even through so small an interval, is the more remarkable on account of the loudness which so often characterises this murmur, and it has furnished one of the arguments in favour of the manufacture of the bruit by the pressure of the stethoscope on the unprotected vein. It will not be necessary to reopen this question, for though without doubt much of the intensity of the neck murmur is factitious, yet that it is not wholly so we have absolute proof in those occasional cases in which a venous hum is conducted into or manufactured within the chest. To these cases I would now draw attention. The occurrence of venous murmurs over the site of the innominate veins and of the superior vena cava is well recognised. Walshe[1] places them in the fifth place in the order of frequency, but he makes no statement as to the percentage of cases in which they are heard. Guttmann[2] likewise, whilst recording their existence, says nothing as to frequency. On the other hand, Weil[3] states that of 600 persons examined only five showed a venous hum in the innominate veins, and that in the same five there was a murmur over the superior vena cava. My attention to this question has arisen in the course of a number of examinations of children for admission into an orphanage school. The routine examination of the chest in these cases has discovered in not a few a bruit at the base of the heart, most frequently in the aortic area or thereabouts, which investigation has clearly shown to be venous. The subject has thus been approached from the heart side, and it is this which, in my opinion, gives it practical importance.

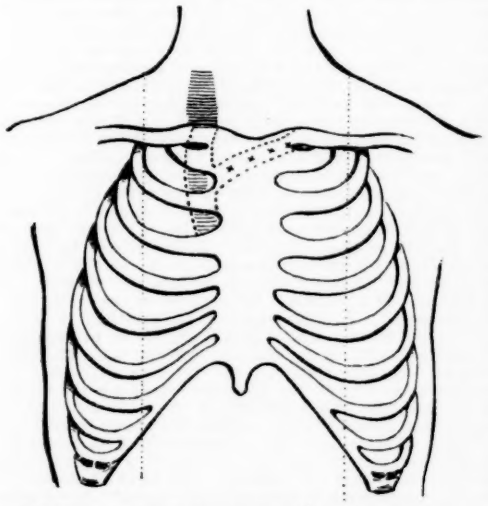
Frequency of occurrence.—In children, according to my experience, the murmur in some degree is very common. Thus in 100 consecutive cases I have notes of its presence in thirty-four—i.e., a proportion of one in three. The murmur in these cases has varied between the limits of an obtrusive buzz or hum, not to be overlooked, and a faint, sometimes very faint, ground tone, which has certainly to be sought for and which might easily be overlooked. I do not consider that 100 cases form at all a sufficient number to establish a percentage proportion, for, as is so often noticed, many of the cases came in runs, and I give the actual numbers as a mere statement of fact to show at least that the thoracic venous bruit is not a rare event. It will be borne in mind that these statements refer to children between the ages of six and eleven years, and, it should be added, orphans, many coming of a phthisical stock, with perhaps a larger proportion than normal who would rank as delicate, and possibly an average chest development which would be slightly deficient; at the same time these children were none of them subjects of disease. The relative frequency with which, I am sure, this murmur will be found to obtain in children will be explained by the thinness of the tegumentary coverings in childhood and by the undeveloped state of the chest. Of the total number of cases in the majority the bruit was faint. In adults I have not examined so systematically, but have met with the murmur occasionally in chlorotic women.

Locality.—The bruit was heard along the right border of the sternum from the sterno-clavicular joint downwards as far as the second rib cartilage, sometimes also as far as the upper border of the third rib cartilage; diagrammatically it may be represented in position and in intensity relatively to the murmur at the root of the neck, as shown.[4]

[1] Diseases of the Heart, fourth edition, 1873, p. 141.
[2] Lehrbuch der Klinischen Diagnose, fourth edition, 1881.
[3] Die Auscultation der Arterien und Venen, 1875, p. 131.
[4] Henoch (Kinderkrankheiten, fourth edition, 1889, p. 795) says under Anæmia, that the venous bruit of the neck is occasionally (bisweilen) heard at the uppermost part of the right sternal border, but a little further on he adds, "I have never detected an unusual bruit in the region of the heart itself" (Abnorme Geräusche am Herzen selbst, konnte ich nie wahrnehmen)

Weil points out that as the left innominate vein lies almost transversely beneath the manubrium sterni to the first right intercostal space, where it unites with the right innominate to form the superior vena cava, the bruit in the left vein must be listened for over the manubrium sterni. I cannot say that I have done this, but have limited my attention almost exclusively to the murmur heard along the right sternal border.

Character.—The character or quality of the bruit is that of a continuous, low-pitched buzz or hum; but, like the murmur in the neck, it often shows systolic and diastolic



The diagram shows the innominate veins and superior cava outlined by dots. The crosses in the left innominate indicate the line along which auscultation of this vein should be practised. The depth of shading in the course of the internal jugular and thoracic veins is intended to mark the degree of loudness of the bruit.

exacerbations corresponding with the accelerations in the current, which attend auricular and then ventricular diastole. This subject has been already dealt with fully in a paper by Dr. Ringer and myself on Pulsations and Murmurs in the Veins of the Neck.[5] Sometimes the murmur has appeared almost entirely diastolic, an observation which would be explained by some as due to the preponderating force of ventricular aspiration. Of the character of the bruit in the five cases observed by Weil this observer says that in three cases it was continuous, but for the most part with diastolic exacerbation; that in two cases it was purely diastolic. In the paper just alluded to, on Pulsations and Murmurs, we drew attention to one characteristic of the murmur in the neck—viz., that if, whilst auscultating the right internal jugular we compressed the jugular on the left side the murmur grew in force, and this we explained as the result of an increased current in the right vein due to distal venous congestion (raised blood pressure) caused by the obstructed left channel. This same characteristic was observed on several occasions when listening along the right edge of the sternum, and on these occasions it was possible in this way to convert an indefinite into a definite murmur.

Practical importance.—The value which, in my opinion, attaches to the recognition of this bruit belongs to those cases in which it is heard at the base of the heart and so comes into relation with the heart sounds. As far as I have observed, the first sound of the heart does not call for consideration here, probably for the reason that it is less definite and that we are accustomed to recognise and disregard murmurish conditions of this sound. At the most, the blurring of this sound, which the venous hum could effect, would simulate a hæmic bruit. But the occurrence of a bruit in the early part of the diastole immediately upon the closure of the sigmoid valves might lead the unwary astray, and it will have been noted above that this is the time when the venous hum is apt to be either at its loudest or to occur alone. A very little care will suffice to unmask this counterfeit, and the points upon which reliance should be placed are: the low pitch of this venous bruit; its relative want of conduction downwards, whilst it may be followed upwards along the right border of the sternum till it passes above the clavicle into a loud venous hum; the effect of compression of the left internal jugular in accentuating it in certain cases, and the absence of any reaction upon the heart or arteries. As to this last there could, of course, be no question of diagnostic difficulty between this venous modification of the second sound and that of true aortic regurgitation where any degree of hypertrophy and dilatation of the heart and any modification of pulse had resulted. Walshe[6] says: "The diagnosis of venous murmurs turns essentially upon their continuous character, and is excessively easy except where accidental circumstances occur to render that character obscure. *This happens sometimes about the base of the heart anteriorly* ....." He goes on to say, further, of the murmur: "In addition to its peculiar quality, pitch, inconstancy, and by being readily influenced by change of posture as guides to the venous origin of the murmur, its rhythm in respect of the heart's beat will sometimes aid in connecting it with the veins. Thus a *diastolic* murmur at the base (the signs of organic disease at the cardiac orifices being deficient) must be venous according to my experience—at least, a hæmic cardiac murmur of that site and rhythm has never fallen under my notice."[7] The italics in the above are not in the original, but are introduced to show that this careful observer had not failed to recognise the need of differentiation in the case of the venous diastolic murmur at the base of the heart. It will be noted that whilst he states the diagnosis of venous bruits in general to rest upon their continuity, yet he gives to this particular murmur a rhythmic character.

In one case, that of a boy aged seven and a half years, I satisfied myself that a low-pitched early diastolic murmur heard at the sternal end of the second *left* intercostal space was really a venous hum. In this case there was a similar bruit in the second right intercostal space, sternal end, but it was more faint; it was also heard in both first intercostal spaces close to the sternum and in both internal jugulars above the clavicle. There was no disease of the heart and there were no signs of overloading of the right side. The bearing of this case of diastolic venous bruit heard at its loudest in the *pulmonary area* is upon those cases difficult of interpretation, of diastolic murmur in the area of the pulmonary artery to which reference has been made by Balfour[8] and Graham Steell. The former has described such a murmur as of mitral stenotic origin; the latter has discussed the subject under the heading, "The Murmur of High Pressure on the Pulmonary Artery,"[9] and has inferred a true *pulmonary* artery regurgitation by over-distension. In the case just quoted the low pitch of the bruit was pronounced. I would suggest that we should not lose sight of the possible venous origin of some of these murmurs in the pulmonary artery area. The true aortic regurgitant bruit it is true is often heard as loud as or louder in the second left intercostal space than it is in the aortic area, but the bruit retains then its high-pitched character and conforms in all other respects to the behaviour of this bruit of high tension, and the differentiation will be as already given.

To summarise and conclude: the occurrence of the venous murmur in the chest is relatively frequent in children; its site is the right border of the sternum from the sterno-clavicular articulation downwards as far as the second or third cartilage, in rare instances it may probably extend lower; for the most part faint in degree, it possesses the other qualities of venous bruits, including systolic and diastolic augmentations. At the base of the heart it may appear chiefly as a diastolic bruit and attaching itself to the second sound simulate aortic regurgitation. In rare cases it may be louder in the second left space than in the aortic area, and some of the unexplained diastolic bruits heard in this area may be of venous nature. Amongst other characters

[5] THE LANCET, Nov. 28th and Dec. 5th, 1891, and April 2nd and 9th, 1892.

[6] Op. cit., p. 147.

[7] See also a case in a child aged eight years mentioned by Dr. Donkin (Diseases of Childhood, p. 415), in which a bruit exactly simulating "double aortic disease" vanished completely during pressure on the cervical veins.

[8] Diseases of the Heart, second edition, pp. 124, 125, and 129; the bruits here noted were in one case at least soft and blowing.

[9] Medical Chronicle, December, 1888.

of the venous murmur its occasional accentuation on compression of the left internal jugular may be remembered.

Perhaps one should add that auscultation was made throughout with the binaural stethoscope and that the question of the manufacture of a bruit by pressure upon the yielding thorax of childhood did not arise.[10] I have had no opportunity of examining infants as to the presence of this murmur, but Dr. Coutts tells me that he is familiar with a bruit of venous character, both in children and infants, in the upper part of the chest on the right side of the sternum, and he has also reminded me of the bruit heard in infants over the manubrium sterni just below the episternal notch, which can often be brought out by retraction of the head, and has been supposed to be an early sign of bronchial gland enlargement.[11] These cases, however, do not touch the special point which I have been desirous of raising—viz., the venous murmur as heard at the base of the heart and the heart disease which it may simulate.

Welbeck-street, W.

THE EXCRETORY ORIGIN OF CERTAIN FORMS OF IRITIS AND CYCLITIS.

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THE practical surgeon knows that most cases of iritis and cyclitis are associated with definite constitutional disorders, such as syphilis, rheumatism, gonorrhœa, or tuberculosis. Whilst this fact is universally admitted few writers appear to have allowed themselves to speculate as to the why and wherefore of the connexion. In the hope of bridging this gap in our knowledge an attempt will be made in the present paper to examine and apply a theory brought forward recently by Dr. David Walsh[1] to account for the origin of certain forms of dermatitis.

The main facts of this "excretory theory" may be thus briefly set forth. Walsh believes that certain inflammatory affections of the skin are due in the first place to local changes set up by the excretion of irritant substances circulating in the blood. In this way he endeavours to account for the eruptions met with in the exanthems, in gout, rheumatism, syphilis, and other constitutional disorders, and for the rashes which now and then follow the employment of such drugs as iodine, bromine, copaiba, antitoxin, and tuberculin. According to him, this hypothesis is supported by many facts. It is positively known that some organic and inorganic products when introduced into the blood may irritate one or several of the channels of exit from the body—for example, the bowel, kidney, or skin. Thus, the virus of gout may attack any outlet, setting up dermatitis, bronchitis, nephritis, or affections of the alimentary canal. The poison of scarlet fever, again, when eliminated by the skin or pharyngeal mucous membrane, gives rise to the characteristic eruption and sore throat, but when thrown off from the system by the kidneys causes nephritis. As regards the dermatitis due to iodine or to bromine, he mentions the significant observation of Adamkiewicz and Guttmann, who found both substances in the discharges from the inflamed skin. Copaiba is usually eliminated from the body by the kidneys and mucous membrane of the lungs, but if for any reason the burden of excretion is shifted to the skin a measle-like eruption will be the result. Similar considerations may be applied to the dermatitis due to belladonna, arsenic, aconite, and the organic extracts. To put the matter shortly, he suggests that these various eruptions take their starting point from acute or chronic excretory irritation of the skin. Lastly, it must be clearly understood that the irritant may be either in the shape of specific organisms or their products, of drugs, or of the chemical products of faulty tissue changes.

For the purposes of argument a first step will be to enquire whether we are justified in regarding the ciliary body as a secretory apparatus. John Vetch[2]—a most acute surgeon—answered that question in the affirmative more than seventy years ago. He noticed that the iris bulged forwards whenever the pupil became blocked by the products of inflammation, from which fact he inferred that the source of the aqueous humour lay behind the iris. He further surmised that the ciliary processes were the anatomical agents concerned with its elaboration. Vetch, however, expressly stated that Dr. Young had anticipated him in suggesting that those parts (to use his quaint phrase) "fulfilled the offices of a gland." His view was endorsed by Mackenzie, and since then has been adopted by ophthalmic surgeons generally, although there has been much difference of opinion as to the precise part of the ciliary body concerned in the secretion of the fluid. The recent histological researches of Nicati[3] upon animals, and of E. T. Collins[4] in man, have placed the secretory functions of the ciliary body almost beyond the range of controversy. The last-named observer has shown that finger-like processes may be demonstrated with the microscope in bleached sections of the anterior part of the uveal tract, more especially at the junction of the pars plicata and non-plicata. These pyriform depressions have a central lumen, are lined by epithelial cells, and open towards the interior of the eyeball. They are separated from the vascular plexus of the ciliary region by a thin basement membrane only. They are said to be present in great numbers. Collins claims that they are glands concerned in the elaboration of the aqueous humour and nutrient fluids of the lens and vitreous. In pursuance of this idea, he regards serous iritis (the aquo-capsulitis, keratitis punctata, Descemetitis, or serous uveitis of other writers) as primarily due to catarrhal inflammation of these glands, and he has, moreover, described melanotic cancers of the same structures. It should be noted, however, that these views are not universally accepted. Thus, John Griffith,[5] as the result of his anatomical investigations, finds but few glands in bleached sections of the ciliary body. He is inclined to think that they have nothing to do with the secretion of the aqueous humour, but "that they control the amount of pigment in the eye and regenerate it as nature demands." At the same time he does not deny the secretory function of the ciliary body, but believes, with Vetch, that the ciliary processes alone furnish the aqueous humour. Alt, again, differs in some respects from both the foregoing surgeons. Whilst admitting, on the one hand, that small pigmented processes spring in comparatively large numbers from the outer surface of the uveal layer of the pars ciliaris retinæ, he denies, upon the other, that they are of a glandular nature. According to him, they are "simply pegs of cells projecting outwards from the pigment epithelium layer," and never possess a central lumen such as Collins has described. Alt believes that the ciliary part of the retina and the pigmented epithelium together constitute one large uveal gland by which the aqueous humour is secreted.[6]

Now the iris and the ciliary body are anatomically continuous. They have also a common arterial blood-supply from the long posterior and the anterior ciliary vessels. Broadly they are, furthermore, of similar histological structure. The causes of iritis are, with scarcely an exception, those of cyclitis also. Hence it is comparatively rare to find inflammation strictly confined to either structure. In many instances the process appears to attack both iris and ciliary body simultaneously, or, if that be not the case, to spread from one to the other at a later stage. For present purposes, therefore, these two parts of the uveal tract may be looked upon as together constituting a single structure, and arguments based upon the one will, *mutatis mutandis*, apply to the other.

Syphilis is the commonest cause of irido-cyclitis. Most writers credit the venereal complaint with 50 per cent. of all cases. That estimate, however, is too low, especially if the hereditary disease be taken into account. The proportion probably lies nearer 60 per cent. Rheumatism or gonorrhœa is responsible for most of the other cases, and we shall not be far wrong if we lay 30 per cent. to the score of those ailments. The remaining 10 per cent. is due to various causes, of which tubercle, gout, malarial and other fevers are among the more important. We are not concerned in this place with traumatic or with sympathetic inflammation.

In glancing over the foregoing list one can scarcely fail to note that almost all the ailments named are intimately

[10] Cf. Henoch, op. cit., p. 795.

[11] Rustace Smith, Disease in Children, 1884, pp. 182, 183; Diseases of Childhood, Donkin, pp. 400, 401. Dr. Donkin here calls somewhat in question the significance of this sign.

[1] Annual meeting of the British Medical Association, 1891; Medical Press and Circular, Dec. 27th, 1893.

[2] Practical Treatise on the Diseases of the Eye, p. 105. London, 1820.

[3] Archives d'Ophthalmologie, tome x., p. 481.

[4] Transactions of the Ophthalmological Society, vol. xi., p. 55.

[5] Ophthalmic Review, vol. xiii., p. 246.

[6] American Journal of Ophthalmology, January, 1896.

associated with, if not actually caused by, micro-organisms. As regards gonorrhœa, tubercle, leprosy, and relapsing fever this fact will be disputed by none. Syphilis, the most common cause of iritis, has for long been thought to be of this nature, probably because of the likeness it presents to the ordinary exanthems. This opinion has been strengthened by the researches of Lustgarten,[7] who has found bacilli not only in the lesions of acquired but also in those of congenital syphilis. They appear to be constantly present, though in small numbers, and require a special method of staining for their successful demonstration. Their existence has been confirmed by independent observers, so that they are now looked upon by many as the causal agents of syphilis. With regard to rheumatism the case is by no means so clear, although the view appears to be gaining ground that it also is due to a specific infection. Hueter seems to have been the first to advance this theory. Newsholme,[8] as the outcome of an extensive statistical study of the disease, has recently stated that acute articular rheumatism must be included among the infective diseases. He has been supported in this view by F. R. Humphreys,[9] who bases his opinion mainly upon the clinical evidences of infectivity observed by him in the course of his practice. If the bacterial origin of acute rheumatism be admitted its truth as applied to the chronic form of arthritis can hardly be denied. Judging from analogy, gout may conceivably be the outcome of infection by an organised ferment, although I know of no actual evidence in support of this suggestion. Lastly, organisms have been described in many fevers—for example, typhoid fever, small-pox, and pneumonia—during recovery from which inflammatory affections of the iris and ciliary body may occur.

Two propositions, then, seem to be clear—first, that most inflammatory affections of the iris and ciliary body are dependent upon a constitutional ailment; and, secondly, that a majority of those ailments are of a bacterial origin. The conclusion follows that most forms of irido-cyclitis result from the action of micro-organisms. An attempt will next be made to show that the immediate cause of these inflammations is to be sought in the vicarious glandular excretion of microbes or their products circulating in the blood or other nutrient fluids of the body.

Twenty years have elapsed since Memorsky[10] proved that chemicals circulating in the blood might find their way into the aqueous humour. He injected a solution of potassium ferrocyanide into the veins, and twenty minutes later was able to demonstrate its existence in the aqueous humour by the perchloride of iron reaction. More recently Ehrlich[11] noted colouration of that liquid after fluorescine had been introduced beneath the skin. These observations prove, therefore, that soluble salts when thrown into the circulation are excreted by the iris and ciliary body. Evidence will be next adduced to show that micro-organisms may be thus got rid of.

The following, reported by Gillet de Grandmont,[12] is a case in point. That surgeon was consulted by a young man convalescent from typhoid fever. The patient, who was thin and weak, had albumin in the urine and a jaundiced hue of the skin. His left eye was affected with iritis; it showed numerous posterior synechiæ and hypopyon, and its vision was so impaired that fingers could be counted with difficulty only at the distance of one metre. Grandmont opened the anterior chamber of the inflamed eye and inoculated a tube of agar-agar with some of the pus. Two days later he obtained a pure culture, which, when examined with the microscope, was found to be made up of the bacilli described by Eberth as present in the spleen, glands, and Peyer's patches of those suffering from typhoid fever. A small quantity of this culture was next injected into the vitreous humour of a rabbit, which, when killed three weeks afterwards, was found to have numerous typhoid fever bacilli in the liver and intestines. The same writer has found streptococci in a culture obtained by inoculating gelatine with the aqueous humour from a case of hyaloiditis (or rather cyclitis) following erysipelas.

It is maintained by some authorities—Leber, for example—that tuberculous inflammation of the iris is always secondary to a tuberculous lesion in some other part of the body. That this view is correct seems to me very probable. We know that most of the cases are met with in young subjects who have a family history of tubercle. Many of them are phthisical or present other signs of active mischief, such as swollen or suppurating glands, bone or joint affections, disease of the middle ear, or "strumous nodules" in the skin. A majority of them succumb sooner or later to tuberculous meningitis. Apart from these considerations tubercle bacilli have been found in the iris by Wadsworth, Treitel, Wagenmann, and Redmond among others, and Weinbaum[13] has succeeded in setting up tuberculous irido-cyclitis by inoculating a rabbit with diseased material taken from the human eye. If we admit that tuberculosis of the iris is secondary to some distant lesion, we are bound to assume that the transference of organisms takes place by means of the blood, and that their presence in the eye is due to a process of excretion by the ciliary body. The small, greyish nodules seen upon the iris are to be explained by supposing that they represent the reaction of the tissues to the irritation set up by the tubercle bacilli.

Primary leprosy of the iris appears to be an exceedingly rare disease, even in countries where lepra is endemic. The characteristic bacilli have, however, been found in the nodulated growths on the iris.

Other instances may be quoted in which micro-organisms have been demonstrated in the anterior chamber. Herman Snellen,[14] for example, has lately reported the two following cases. 1. A woman aged twenty-eight had marked Descemetitis of the left eye, the lower third of the cornea being speckled over with punctate opacities. Increased tension coming on, sclerotomy was performed. One of the punctate dots escaped with the aqueous humour, and was found to be made up of very short bacilli capable of cultivation on agar-agar. This patient later developed Descemetitis of the other eye, in one of the dots from which identical microbes were demonstrated. 2. A young man had a similar affection of his right eye. The anterior chamber was tapped, a dot examined with the microscope, and found to consist of cells and short bacilli. Snellen concludes from these facts that Descemetitis is a disease *sui generis*, and that "it is due to microbes growing in the anterior chamber, which by their producing toxines cause an irritation of the uveal tract." It is unfortunate that he gives no information as to the cause of these interesting cases, and, further, that he appears to have made no attempt to identify the bacilli. It seems to me that their etiology would be better explained by assuming that both were due to some constitutional condition of microbic nature, and that the organisms found in the anterior chamber represented an excretion of the virus by the ciliary body.

Micro-organisms, then, have been found in iritis associated with typhoid fever, erysipelas, tubercle, and leprosy. An endeavour will now be made to show that their existence in other forms of iritis due to infective disease may be predicted with a fair amount of confidence.

Iritis is not infrequently met with in those suffering from gonorrhœa. The inflammation is essentially chronic and evinces a great tendency to relapse. Its subjects are usually between twenty and forty years of age; they are pale and weakly, and often inherit a gouty or rheumatic diathesis. They are liable to renewed attacks of iritis whenever they contract gonorrhœa. The inflammation of the eye is almost invariably associated with, or preceded by, chronic swelling of certain joints—for example, the knee, hip, ankle, elbow, or those of the carpus or tarsus. These articular affections may now and again be replaced by sciatica or other painful conditions of the peripheral nerves. Now it is a singular fact that this blennorrhagic iritis arises at precisely the same period as gonorrheal arthritis—that is to say, after the symptoms of acute gonorrhœa have yielded to a gleety discharge from the urethra. Moreover, inflammation of other serous membranes has been noted as arising during the same period. Mackenzie[15] many years ago mentioned the case of a patient in whom the virus seemed to produce chronic peritonitis, and of another who died from inflammation of all the internal serous membranes. Mazza saw pleurisy, pericarditis, and endocarditis, and polyarthritis during an attack of gonorrhœa. In the effusion from the pleural cavity he found organisms

[7] Die Syphilisbacillen, Wien, 1885.
[8] THE LANCET, March 9th and 16th, 1895.
[9] Medical Press and Circular, Nov. 6th, 1895.
[10] Graefe's Archiv, 1865.
[11] Deutsche Medicinische Wochenschrift, 1882.
[12] Archives d'Ophthalmologie, 1892, p. 623.
[13] Archiv für Augenheilkunde, January, 1893.
[14] Ophthalmic Review, 1894, p. 259.
[15] Practical Treatise on the Diseases of the Eye, London, 1854, p. 565.

that were identical with Neisser's gonococcus. Bordoni-Uffreduzzi[16] has described multiple arthritis during gonorrhœa. Fluid taken from a joint was found to contain the characteristic organisms, which, after cultivation, were inoculated into the urethra of a young and healthy man. A typical attack of gonorrhœa was the result, and gonococci were demonstrated in the discharge. So far the genital tract has been the starting point of these various inflammations, but that is by no means essential. In 1881 Poncet[17] noted swelling of the knees and other joints after gonorrhœal pus had been applied to an eye with pannus. Four years later it was shown by Clement Lucas[18] that arthritis might develop in infants with purulent ophthalmia—a disease that is due, of course, to direct inoculation of the conjunctiva with pus containing gonococci. He narrated three instances of the kind. His observations have been confirmed by Fendick,[19] Debierre, Saswornitzky, and Darier, and I have myself seen such cases. Deutschmann[20] noticed acute inflammation of the knee in a child three weeks after purulent ophthalmia. He found typical gonococci not only in the conjunctival secretion, but also in the fluid obtained from the knee-joint by puncture. Haushalter has recently reported a similar case.[21] These facts admit of but one explanation—namely, that under certain conditions the gonococcus is able to find its way into the blood, from which it is excreted by the synovial and serous membranes. This vicarious excretion sets up a corresponding inflammation. We should therefore expect to find organisms in the anterior chamber, but, as far as I know, nobody has yet looked for them in that position.

All the facts at disposal seem to indicate that syphilitic iritis is due to the local presence of microbes. Thus, the ordinary form of the disease appears as an early secondary symptom—that is to say, during the time when the specific virus is diffusing itself by means of the blood throughout the entire economy. The severity of the iritis, moreover, appears to vary directly with the intensity of the other syphilitic manifestations. Nodular growths, or condylomata, of the iris are probably present in every case. They are strongly suggestive of local irritation, such as might very well be set up by bacilli deposited from the aqueous humour. It is a significant fact that the Descemetitis of hereditary syphilis, which is sometimes observed about the age of puberty, may be preceded by, or associated with, synovitis of the knee or other large joints. This complication might be reasonably explained on the grounds of attempted excretion by the synovial membrane, while from the analogy with gonorrhœa bacilli should be found in the joint effusion and probably, also, in the aqueous humour of the inflamed eye.

It is still uncertain whether rheumatism should or should not be included among the microbic diseases. It is, therefore, impossible yet awhile to make any definite statement as to the etiology of the iritis associated with that disease.[22] At the same time, it is thinkable that the excretion by the ciliary body of an irritant like lactic acid—which is generally admitted to be present in the blood of rheumatic patients—may be enough to set up the processes of inflammation. It is, of course, possible that gouty irido-cyclitis may be the outcome of a similar glandular irritation by uric acid.

Affections of the iris and ciliary body are by no means uncommon in relapsing fever. Trompetter[23] met with them in 6 per cent. of his cases. It seems reasonable to suppose that the primary cause of these inflammations also is to be sought in a direct excretion of the spirilla Obermeieri by the glandular part of the uveal tract.

Some instances of the metastatic irido-cyclitis met with in the puerperal state and pyæmia lend themselves to a similar explanation. Organisms from a septic focus gain admission to the blood, where they thrive and multiply. Nature attempts to throw them off by various excretory channels—for example, the skin, the kidneys, the serous and synovial membranes, and the anterior part of the uveal tract. In the first case, transient erythema is observed; in the second, nephritis; in the third, peritonitis, pleurisy, pericarditis, or synovitis; and in the last, irido-cyclitis. This primary uveal mischief may be attended by numerous secondary complications, due mainly to (*a*) the development of other micro-organisms, and (*b*) tissue changes, acute or chronic. It is obvious that this explanation does not cover the whole of the ground. It accounts for those cases only where inflammation begins in the iris and ciliary body. The conditions are wholly different when those structures are involved secondarily to the choroid and retina. It has been shown conclusively that such cases are due to septic emboli deposited in the vessels of those parts by the blood current, so that their pathology is similar to that of pyæmic abscesses in the subcutaneous tissues and viscera.

Grandclément[24] has attempted to draw a distinction between inflammation of the stroma of the iris and of its posterior pigmented layer or uvea. The latter affection he calls uveitic iritis, and he describes it as marked by an insidious and relapsing course, a gradual formation of posterior synechiæ, and a progressive failure of sight. It is met with chiefly in women between the ages of thirty and fifty years, who show no signs of rheumatism or syphilis. Grandclément suggests that it is due to a kind of auto-intoxication, the result of an inadequate excretion of urine which he has noted in several of his patients. He surmises that the ptomaines thus pent up in the system seek the *locus minoris resistentiæ*, which in this particular case happens to be the eye. Professor de Lapersonne[25] has suggested a somewhat similar etiology for iritis. He believes that many instances of relapsing inflammation of the iris are due to the absorption of septic products (ptomaines or toxalbumens) from the alimentary canal.

Many patients with irido-cyclitis tell us that the disease was set up by exposure to cold, strain, or some slight injury to the eye. Bronner[26] has given particulars of three cases in which concussion of the eyeball was speedily followed by local syphilitic disease. The same sort of thing is not unknown in acute pneumonia and in other infectious maladies. So far as the eye is concerned, these injuries, by increasing the vascular supply, may be assumed to increase the functional activity of the glandular apparatus and hence to determine the excretion of organisms.

Conclusions.—1. Most inflammatory affections of the iris and ciliary body are the outcome of constitutional ailments, which are in turn due to microbic infection. 2. In certain forms of irido-cyclitis specific micro-organisms have been found in the contents of the anterior chamber. 3. There exist good grounds for believing the proximate cause of all cases of endogenous irido-cyclitis to be the excretion by the ciliary body of micro-organisms or their products. 4. Therefore, bacteriological examination of the aqueous humour might furnish a ready means of detecting an organism in those maladies thought to be of infectious nature, such as rheumatism. It might also lead to a correct conclusion as to the cause of doubtful cases of irido-cyclitis.

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[16] Archives Italiennes de Biologie, tome xxii., 1895, p. 154.
[17] Archives d'Ophthalmologie, 1881, tome i., p. 213.
[18] Brit. Med. Jour., Feb. 28th, July 11th, and Oct. 10th, 1885.
[19] Ibid., Oct. 31st, 1885.
[20] Graefe's Archiv für Ophthalmologie, xxxvi., 1., p. 109.
[21] Semaine Médicale, 1895, tome xv., p. 382.
[22] Since the above was written I find that Ahlström has twice succeeded in setting up iritis in rabbits by inoculating the anterior chamber with a piece of iris taken from a case of rheumatic iritis. No such result followed when the iris was derived from a non-septic source, such as an eye with cataract. Micro-organisms were not recognised.—Beiträge zur Augenheilkunde, Band xxi., p. 36.
[23] Klinische Monatsschrift für Augenheilkunde, 1880.

A CASE OF BILATERAL PARALYSIS OF THE ABDUCTORS OF THE VOCAL CORDS DUE TO SYPHILIS.

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BILATERAL paralysis of the abductors of the vocal cords is one of the most unusual affections of innervation to which the larynx is subject, and inasmuch as the number of cases placed on record is comparatively small every additional case is necessarily of considerable interest. Such paralysis may be due to a lesion either myelopathic, neuropathic, or myopathic in origin.

When myelopathic the lesion is situated in the medulla and involves the abductor centre, the nuclei of the recurrent laryngeal nerves, or the efferent fibres from those centres before they leave the medulla, and may be due to vascular occlusion or hæmorrhage, new growths, or degenerations (frequently syphilitic). Onodi[1] showed experimentally in

[24] Bulletins de la Société Française d'Ophtalmologie, 1891, p. 45.
[25] Le Bulletin Médical, Feb. 21st, 1892.
[26] Transactions of the Ophthalmological Society, vol. x., p. 199.
[1] Onodi: Revue de Laryngologie, 1892.

dogs that the brachial plexus supplies some motor fibres to the larynx which pass upwards in the cervical sympathetic, and he saw reason to think that this is also true in man, in which case paralysis of the abductors might be due to a lesion in the cervical part of the cord. As to whether abductor paralysis in man can be due to lesions higher up—either of the cerebral cortex or of the fibres connecting the cortex with the medulla—we have insufficient grounds for deciding, but it seems highly probable that these medullary centres are governed by still higher centres, though of themselves usually capable of controlling the abductor mechanism of the vocal cords. It has, indeed, been shown by Mr. Horsley and Dr. Semon [2] that stimulation of the cortex in the lower part of the ascending frontal convolution in the macaque monkey causes adduction of the cords, and abduction of the cords has been similarly obtained in the carnivora. Moreover, cortical stimulation near the centre for phonation causes exaggeration of the laryngeal respiratory movements. It seems hopeless to expect much assistance from clinical observation, for there is every reason to think that the cortical representation is bilateral, and that the lesion must also be bilateral in order to produce abductor paralysis. Such cases are, of course, clinically very rare. It is well known that functional disturbance of the cortical centres may cause laryngeal paralysis, but this is nearly always a paralysis of the adductors, not of the abductors of the larynx. The fibres connecting these cortical centres with the medulla have been shown to pass through the internal capsule. Cases of so-called functional abductor paralysis have, however, been described, among others, by Biermer, Burow,[3] and Schreiber,[4] and Michael[5] of Hamburg records a rather doubtful case for which tracheotomy was performed.

When neuropathic in origin bilateral abductor paralysis must be due to involvement of both recurrent laryngeals either directly or by pressure of aneurysm, mediastinal tumour, enlarged thyroid gland, &c. Such morbid conditions can, when present, usually be made out by physical examination, and the diagnosis is then greatly simplified. Cases have been recorded which seem to point to a picking out of the abductor fibres in cases of more or less general peripheral neuritis. Rosenbach first enunciated, and Dr. Semon [6] first demonstrated, the fact that in organic disease there is a proclivity of the abductors of the larynx to fail before the adductors, and the position which Dr. Risien Russell [7] has shown the abductor fibres to occupy in the recurrent laryngeal—i.e., on the inner side of the nerve, nearer the trachea—may in some cases account for this. It is, however, noteworthy that whereas the abductors are affected in organic disease, it is the adductors which (in the adult) overpower the abductors when the whole side of the larynx is caused to contract by electrical stimulation of the cut recurrent laryngeal nerve, the muscles subserving phonation as opposed to those subserving articulation (Semon, Onodi, and Donaldson).

Abductor paralysis of myopathic origin has been described by Fischer,[8] Burow, Mackenzie, and others, but short of a post-mortem examination such cases are not possible of diagnosis.

The following is a case of bilateral abductor paralysis which necessitated immediate tracheotomy. A man aged thirty-six years was admitted to University College Hospital on June 23rd, 1895. The patient was engaged in stable work daily from 4 A.M. to 6 P.M. He had had syphilis more than a year previously. In November, 1894, when getting up one morning he had a fit of coughing and found great difficulty in getting his breath, his wife being obliged to hold him up in a sitting posture. He became blue in the face, and for an hour the dyspnœa continued, but gradually diminished and the colour improved. He went to work next day. A fortnight afterwards he had a similar attack when in the street, which did not last so long. In January, 1895, he had another attack with the same symptoms, which lasted about an hour, but he continued his work next day. On June 23rd, between 5 and 6 P.M., he was found lying insensible in the stable, and was immediately brought to University College Hospital. When admitted the patient, who was a strong muscular man, showed extreme cyanosis, and there was a considerable amount of recession of the lower part of the chest on inspiration. He was unconscious, and the pupils were somewhat dilated, but equal. Knee-jerks were present. The pulse was 80, of good tension, compressible and regular in time and force. Mr. Horsley, who happened to be in the hospital, examined the throat and upper part of the larynx with his forefinger, but could detect no foreign body. On examining the larynx with a laryngoscope the upper opening of the larynx, the aryteno-epiglottidean folds, and the vocal cords were seen to be congested and swollen, and the opening of the glottis contracted to a mere chink. On inspiration the vocal cords were drawn closely together, on expiration they separated to a very slight degree. The following is Mr. Horsley's description: "Whole interior of larynx was intensely congested. The arytenoids were separated by two pink swellings which met in the middle line. The mucous membrane on the processus vocales was deep red in colour and nodular in its swelling. On inspiration both cords were sucked violently together and remained so. On expiration there was a slight opening of the glottis. Through this narrow slit the sub-glottic region appeared to be free." Some urine was drawn off with a catheter, but no albumin was present. Under Mr. Horsley's direction I performed tracheotomy immediately, but just before the trachea was opened the patient stopped breathing, his pulse became almost imperceptible, and his face pallid. The trachea was promptly opened and artificial respiration performed. After a few minutes the patient began to breathe naturally and a tracheotomy tube was inserted. The pulse improved considerably and the colour became more natural, so after the dressings had been applied he was removed to Mr. Barker's ward. On the next morning, June 24th, the patient was breathing quietly and the swelling of the epiglottis had almost disappeared and that of the aryteno-epiglottidean folds was less, but the arytenoids remained much swollen. The right vocal cord moved very feebly outwards on inspiration, the left hardly at all. The free edge of both vocal cords was irregular and ulcerated, more especially the right, and the surface somewhat redder than natural. A mucous patch was present at the right angle of the mouth, the palms of the hands were fissured, and there was superficial ulceration of the scrotum. The following was ordered to be given three times a day: Potassii iodidum, gr. v.; sodii iodidum, gr. v.; ammonii iodidum, gr. v.; acidum hydrobromicum dilutum, ℥ v.; infusum gentianæ compositum, ℥ i. Unguentum hydrargyri (℈ i.) was also ordered to be rubbed into the palms of the hands every day. On the 26th a rubber tracheotomy tube was substituted for the silver one, and on the 29th there was no swelling of the rima glottidis present, but the edges of the cords were still ulcerated. His breathing was perfectly easy. The rubber tube was removed and the wound covered. He could then speak well but hoarsely. On July 18th the tracheotomy wound had healed. The abduction of cords was much more free and the movements on vocalisation were good, but the voice was hoarse. The patient's hands were nearly well. He was discharged from the hospital, but ordered to continue the iodide. He was seen again on Oct. 7th, when the free edges of the vocal cords were still irregular, but the movements were much improved. He was ordered to continue the iodide.

This case is of interest from the point of view of the history and of the diagnosis. The final acute attack which necessitated tracheotomy had been preceded by three others during the previous eight months, from all of which the patient recovered without surgical interference. In the intervals he experienced no uneasiness, no dyspnœa even on exertion, to which his work rendered him peculiarly liable. His voice was said to be natural. The onset of the acute attack was in each case very rapid, so rapid, indeed, as to preclude even his calling for assistance. The signs of secondary syphilis were sufficiently obvious when the patient was brought to the hospital, and syphilis was held to be the final cause of the paralysis. Whether an acute inflammation supervening on the more chronic ulceration of the cords could paralyse the abductor muscles directly or reflexly through the medullary centre, or whether there was also an old-standing degeneration of the abductor centre in the medulla, or a recent thrombosis of the vessels supplying this centre, it is difficult to say, and some might point to the sudden onset of unconsciousness as suggesting a cortical lesion. It is, however, held by some authorities that

[2] Horsley and Semon: Philosophical Transactions of the Royal Society, 1892.
[3] Burow: Berliner Klinische Wochenschrift, 1885, p. 593.
[4] Schrieber: Deutsche Medicinische Wochenschrift, 1878, p. 615.
[5] Michael: Wiener Medicinische Presse, Nos. 41-42, 1885.
[6] Semon: Numerous papers; Dr. Semon's views collated in his paper in Virchow's Festschrift.
[7] Risien Russell: Proceedings of the Royal Society, 1892.
[8] Fischer: Wiener Medicinische Wochenschrift, 1886, p. 593.

occlusion of the glottis may cause vertigo and unconsciousness (Casselberry, Roe), and this would be an adequate explanation. A somewhat similar case has been recorded by Sota y Lastra, in which the trachea was opened when the patient was almost moribund, and artificial respiration was necessary for an hour afterwards. The case was one of syphilitic laryngitis with recurrent suffocative attacks. The patient recovered.

Tracheotomy has of course been done more or less frequently for bilateral abductor paralysis due to syphilis, and cases have been recorded by Carmaggio, Raymond, Wolfenden, Butlin, Taylor, Böcker,[3] and others, but in most cases the syphilis was old-standing and caused stenosis of the trachea, cicatricial contraction of the glottis, or peritracheal enlarged glands pressing on the recurrent laryngeals. In such cases the probable necessity for tracheotomy at some future time has usually been foreseen, and careful watch has been kept on the patient in the interval.

Apart entirely from a syphilitic origin which could be demonstrated, abductor paralysis has from time to time necessitated tracheotomy, and a careful examination of some of the cases recorded as spasm of the larynx renders it probable that these were really cases of abductor paralysis. That the distinction between adductor spasm and abductor paralysis is not always easy is well shown in whooping-cough, in which Dr. Poore has ably advocated the view that the prominent feature is a recurring sudden abductor paralysis.

My thanks are due to Mr. Barker for permission to publish the case.

Gordon-place, W.C.

THE HIGH ALTITUDES OF SOUTH AFRICA: SOME PRACTICAL POINTS IN THEIR AERO-THERAPEUTICS.

BY H. LAING GORDON, M.D. EDIN.

A VARIETY of reasons into which it is unnecessary to enter here have in recent years caused an increasing number of phthisical persons to flock to South Africa. It is apparent that much misapprehension of the powers of the climates of that region exists in both the lay and professional minds of this country, otherwise so many unsuitable cases would not be allowed to go to South Africa. Professional utterances regarding the climate have so far, in England at least, dwelt rather upon its possibilities than upon results achieved. It is to be hoped that some of the leading South African practitioners will publish results and statistics for the benefit of the profession at home; it cannot be said that they have not the material. It may serve a good purpose if one who has had some little experience in one of the high altitude districts of Cape Colony briefly draws attention to some practical points concerning the climate and the cases suitable for treatment by residence there. In doing so I shall rely not only on my own experience, but also upon the opinions of South African medical men as published in the South African medical press.

South Africa possesses several climates, some of which are highly unsuitable for the treatment of phthisis. The following districts are, however, all more or less suitable: (1) the Karroo (Cape Colony), (2) the Orange Free State, (3) the South African Republic, (4) the highlands of Natal, (5) Bechuanaland, and (6) the highlands of Basutoland. The treatment of phthisis has been carried on in the Karroo and the Orange Free State for many years, and these two districts are likely to remain the most popular owing to their comparative accessibility for Europeans. Each of the other districts named has some individual drawback at the same time that it possesses no superior feature from a health point of view. A limited number of subjects—e.g., such as are equal to a hunting expedition in Bechuanaland—may benefit in some of them. For all practical purposes the Karroo and the Orange Free State are sufficient; they possess a climate second to none and a combined area of about 150,000 square miles at an elevation of from 2500 to 6000 feet above the sea level. For detailed information on the climate of these parts I may recommend the "Official Handbook of the Cape and South Africa," wherein an excellent account is given by a Cape Town practitioner. The climate derives its value in aero-therapeutics from (1) the elevation, (2) the extreme dryness of both air and soil, (3) the almost constant and brilliant sunshine, and (4) the pure air. These conditions are available practically anywhere in the two districts, but it is not sufficiently recognised that the effect of the last two at least is greatly, if not entirely, lost to those who spend their time in a village or township.

It has been erroneously stated that phthisis is unknown among the natives (of European descent or aboriginal) in the South African high altitudes. Immunity from tuberculous disease depends in South Africa, as in other elevated regions, upon "the avoidance of overcrowding, in-door life, and insufficient dietary; for in the presence of these no altitude could give immunity."[1] Since European life was thoroughly introduced into South Africa and white and black people have dwelt together in insanitary towns and villages with imported cases of tuberculosis in their midst, and since alcohol and syphilis have ravaged the population unchecked, no class of inhabitants—white, coloured, or black—has escaped from phthisis, even in the most elevated towns. On the other hand, amongst the Boers and dwellers on farms who lead an isolated, open-air life, tuberculous disease is practically unknown in many districts. One district surgeon of fourteen years' experience in his township and district informed me that he attributed the introduction and spread of pulmonary tuberculosis among the native population which he has witnessed there to the fact that the place has within recent years become a resort for European phthisical patients. In the light of modern knowledge of the channels of infection in tuberculosis the following statement by the head of the Colonial Government Veterinary Department is interesting. He writes:—"I beg to inform you that tuberculosis is comparatively rare among farmers' cattle throughout Cape Colony; it is, however, frequently met with among milch cows, more particularly about towns. *In the high districts I have not seen any cases in native-bred cattle*, [the italics are mine] but some cases have been observed in imported cattle, and the circumstances clearly indicated that these animals were affected before they left England." Whatever the up-country towns and villages may have been twenty years ago, undoubtedly the majority are not now free from phthisis.

So long ago as the end of the eighteenth century Dr. Rush of Philadelphia warmly commended "climate" in the treatment of phthisis, but added that it succeeded only when accompanied by "exercise and such conditions as invigorate the powers of mind and body." About the same period Dr. Gordon of Madeira ascribed the inefficacy of that island climate to the difficulty of obtaining exercise owing to the badness of the roads at that time. Much the same views as these are urged to-day on scientific grounds by a leading authority, who in a paper on the value of fresh air in phthisis pithily summarises rational treatment as being that of "fortifying and sustaining the resisting powers of the patient." "Life in the pure air," he says, "judicious exercise, nourishing diet, and such aids as cod-liver oil and tonics have effected more than all the antiseptic treatments put together."[2] It is not unreasonable to point out how much more satisfactorily these desirable conditions are obtained on farms situated on the open veld than in the townships and villages. In common with other practitioners of greater experience than myself I can point to highly encouraging results among those who have lived upon farms at the same time that I have to deplore the steady retrogression of the great majority of those who were confined to a township. At the present day little, if any, attention is paid to sanitation in the average up-country township; to say the least the prevailing conditions are highly favourable to the life of the tubercle bacillus. Refuse is thrown just outside the houses or is lazily deposited on the outskirts, and these same outskirts are also used as a latrine by the natives; short walks for the invalids are therefore somewhat unpleasant. The houses are badly built, draughty and ill-ventilated. No steps are taken to destroy the bacilli emanating from the patients in the hotel or boarding-houses. The stoep (verandah) of the hotel is rendered unpleasant by being scattered over with the

[3] Carmaggio: Typis Cosmi, 1890; Raymond: Gazette des Hôpitaux, 1890; Wolfenden: Journal of Laryngology, 1892, p. 292; Butlin: St. Bartholomew's Hospital Reports, 1882; Taylor: Guy's Hospital Reports, 1883; Böcker: Deutsche Medicinische Wochenschrift, 1877.

[1] Aero-therapeutics, by Dr. C. Theodore Williams, p. 111.
[2] Dr. C. Theodore Williams: THE LANCET, Nov. 3rd, 1894.

tubercle-bearing expectoration of many phthisical invalids, and during the hottest part of the day this is diffused over the town by thousands of flies. The air of the streets is laden with the nauseating odour of the ox-dung used as fuel, which also taints the food. If he is unable to take active exercise the patient's day is one monotonous round of gossip on the stoep or in the bar, billiard-room, or club, varied by intervals for temperature-taking and the melancholy eating of meals which are highly indigestible under the circumstances. These conditions prevail to a greater or less extent in all the so-called "health resorts" of South Africa. Kimberley alone may be said to be under anything approaching effective sanitary government, but, in the words of Dr. Lawrence Herman, it is "by no means a suitable climate for invalids." On a Karroo, or Free State farm, the interest lies entirely out of doors; *nolens volens* the patient spends his day in the open air. Half a dozen yards from the door he breathes the purest air. He is removed from the conditions which foster the disease germs and from the unhealthy and depressing company of an hotel full of invalids. However thoroughly town-bred he may be the many charms of South African farm-life prove of entrancing interest to him. Day after day is spent in the veld either on horseback or on foot with gun in hand, and he returns to the homestead ready to do healthy justice to the nourishing, if homely, fare. From personal experience I can say that good milk, butter, eggs, and other nourishing food is plentiful on properly selected farms, and is greatly superior to that supplied in the "health resorts." I have not known a patient who, having tried the farm-life, did not prefer it to that in an up-country town. I am strongly of opinion that the real attraction of the Karroo and the Orange Free State lies in the ease with which suitable cases may be isolated (in twos or threes, perhaps) under the most favourable climatic conditions in an environment that encourages, if it does not enforce, habits which "fortify and sustain the resisting powers of the patient." The most suitable cases for treatment under present circumstances are (1) cases of *predisposition* to pulmonary tuberculosis, hereditary or acquired, without actual developed disease; and (2) cases of *incipient phthisis*, particularly in young male adults. The cases of *predisposition*, almost without exception, show rapid and remarkable improvement on farms. The figure fills out, the chest circumference notably increases, and in a few months the patient who arrived pale and delicate-looking assumes the appearance known as "the picture of health." The country offers attractions as a permanent residence for such persons, if they are energetic and provided with reasonable capital. Farming may be learnt and followed as a profession; or, after a time, other occupations may be found in some of the constantly developing new districts. Used in this way South Africa may have a greater future as a preventive of tuberculosis than it ever can have as a curative. By no means all cases of *incipient phthisis* can be expected to be benefited. There should be absolutely no indication of rapid progress or of extension of disease. The lesion should be limited and accompanied by very little or no fever. There should be no complication. The patient should be fond of, and able for, out-of-door exercise, be of a self-reliant and adaptable disposition and not of a nervous or irritable constitution, and be possessed of an average good digestion. Too much stress cannot be laid upon these points. It is a regrettable fact that patients arrive weekly in South Africa in too advanced a state of disease to come under the heading of "suitable cases." These persons find their way to some of the reputed health resorts; their best chance lies under careful systematic supervision, but there is no such provision for them in South Africa. A number live bravely on amidst what must be painful discomforts to them, and ultimately succumb; others return to England in a worse condition than when they left. It is both possible and probable that among these cases there are some which, if systematically cared for, might benefit to a greater or less extent by the climatic conditions. For several years the professional and lay press in Cape Colony have agitated for the establishment of scientifically conducted sanatoria in suitable situations. It is now stated that a certain available fund is to be devoted to the foundation of such an institution at Kimberley. It is probable that if the medical men in the country who have studied the question had been consulted several more suitable sites would have been indicated. Competent authorities generally condemn Kimberley as a resort for any but a very limited number of cases. The proximity of "theatres, clubs, other places of amusement, and the river," held out as an advantage, is not desirable in the eyes of those who wish their patients to be treated by sunshine, pure dry air, and exercise, as well as systematic supervision. The most suitable site for a sanatorium would be on the veld within easy distance of the railway and a township, and protected, as many places are, and the Kimberley district is not, from high winds and dust. Until some such suitable institution is started grave risk is incurred in sending any but the two classes of cases mentioned to the country.

I append a table of cases which came under my observation during the season 1894-5 in one of the Karroo "health-resorts"; the number is too small to form a ground for any definite deductions. The township and district are over 4000 feet above sea level; the population of the township is about 1500, and of the entire district about 9000. Many English farmers receive patients, and posts as tutor or governess on English or Dutch farms are to be had by persons of average education. The winter (May to September) is the season when suitable cases receive most benefit. To derive really permanent benefit patients should remain for a year or two at least. Unfortunately, the majority go out only for the summer (November to March) and hasten home in April or May. The statement that the summer heat is easily tolerated owing to the rarefied air is misleading; the early morning is delicious, and no harm results from sitting out in the refreshing cool of the evening; but from 11 A.M. to 4 P.M. the summer heat is very trying to both the healthy and the invalid, particularly in the Orange Free State and the Kimberley district. The voyage to South Africa is a good one as sea voyages go. Whichever line the patient may select (and they are all much alike) he would do well to carefully choose his ship; the comfort, food, and attention shown to passengers vary with the ships rather than with the lines. Overcrowded mail steamers are to be avoided. On arriving at Cape Town the patient should lose no time in obtaining competent medical advice as to what part of the country he should go to.

Cases.	Number.	Arrested or improved.	No change.	Worse.	Remarks.
Predisposition.	5	5	—	—	4 returned home after an average residence of 7 months and 1 remained permanently; 4 lived on farms and 1 in township.
Hæmoptysis with no definite local lesion.	3	3	—	—	1 lived on farm and 2 travelled about the country; the average residence was 7½ months.
Limited catarrh or consolidation.	9	6	—	—	3 lived on farms, 1 in township and then farm, and 2 in township only; 1 remained permanently; the average residence of the other 5 was 10¼ months.
	—	—	—	3	All lived in township; 1 died (intercurrent disease), 1 (neurotic) was sent home, and 1 developed laryngeal trouble and was sent to lower level.
Fibroid phthisis.	2	—	2	—	1 went to lower level and 1 went to the Orange Free State (lost sight of); both lived in township.
More advanced, extensive, or complicated.	9	—	2	—	Both returned home (lost sight of).
	—	—	—	7	1 was sent home (reported greatly improved by good diet and country air), 1 went home (lost sight of), and 5 died in the country, on voyage home, or soon after arrival in England. All lived in township.
Total ...	28	14	4	10	—

Finally, I must urge, as has been often done before by Dr. Eyre of Claremont and Dr. Clarke of Bloemfontein, that South Africa is not a poor man's country. Employment is most difficult for a delicate person to obtain even if master of some trade; while to send a phthisical clerk or shop assistant to the country with, as frequently has happened, only a few pounds in his pocket is, in nine cases out of ten, to send him to a pauper's grave. If this were more widely understood it would not happen that so many young men

have to be supported in their last days and finally buried by the inhabitants of up-country health resorts six thousand miles from home.

Honor Oak, S.E.

A NEEDLE EXTRACTED FROM THE HAND BY THE ASSISTANCE OF THE ROENTGEN RAYS.

BY W. H. BATTLE, F.R.C.S. ENG.,

ASSISTANT SURGEON TO ST. THOMAS'S HOSPITAL AND TO THE ROYAL FREE HOSPITAL.

A CASE which has recently been under treatment at the Royal Free Hospital gives proof of the occasional usefulness of the new method of photography. A woman aged thirty years had been sent to me on account of pain in the region of the metacarpo-phalangeal joint of the right thumb, which she said was due to the presence of part of a needle which she ran into this part of her hand nine months before. A medical man had failed in an attempt to find the needle three months previously. There was an appearance of slight swelling in the neighbourhood of the joint, considerable tenderness, with some thickening, but no foreign body could be felt. She had difficulty in flexing the thumb and was unable to use the hand properly. The only way in which it could be proved that there was a piece of metal in the hand was either by a special electrical apparatus or by means of the new photography; the latter possessed special advantages, as in the case of a piece of needle it would not only show it if present, but also indicate the direction in which it lay. Mr. Rowland kindly took a photograph of the hand, and discovered the piece of needle lying across the metacarpo-phalangeal joint, but would not say whether on the anterior or posterior aspect of the joint. This was, however, decided by the condition of the part. On Feb. 21st I made an incision in the long axis of the thumb in a line corresponding to the interval between the abductor pollicis and the opponens pollicis, almost down to the joint, and exposed the end of the needle at once, which appeared as a little black spot in granulation tissue. It was readily extracted with dissecting forceps, and was about half an inch long and the eye-end of a fine needle.

The position of the needle having been detected upon the photograph by Mr. Rowland, was painted by him in white for Mr. Battle's better information.

Mansfield-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SULPHATE OF ATROPINE IN THE TREATMENT OF POISONING BY OPIUM.

BY B. LEWIS PATON, M.B., C.M. EDIN.

THE value of sulphate of atropine in the treatment of poisoning by opium seems to be shown by the following case.

On Oct. 12th, 1895, a Chinese woman, married, aged twenty-nine, living in Amoy, tried to poison herself by taking, according to her own statement, two ounces of prepared opium in a cold infusion of some sort which she had made overnight. She drank the mixture at about daylight, but it was not found out till some hours afterwards. Native methods were used to produce vomiting, so that by the time I was asked to see her she had already vomited frequently, the vomited matter, according to the statements of those who saw it, giving unmistakable evidence that opium had been taken. I was not at first allowed to see the patient, but her hand was thrust through the bed-curtain to enable me to feel the pulse, and by asking her questions I gathered that she was already somewhat drowsy. A mixture containing atropine sulphate was prescribed to be taken at frequent intervals. In the afternoon I was again sent for, and was now allowed to see the patient, whom I found in bed and deeply comatose, it being difficult to rouse her. She was unable to swallow, so that the medicine could not now be taken by the mouth. The friends were indignant when I suggested that she should be got out of bed, moved about, and any and every means used to keep her awake. How could they treat a lady in that way? I then suggested the use of the hypodermic needle and the injection of a drug which was believed to be antagonistic to opium. Strange to say, the husband gave his consent, for the Chinese are not yet sufficiently acquainted with this method of introducing a drug into the system. The patient was now lifted out of bed and put in a chair, and the hypodermic injection was begun at 3 P.M., a solution of atropine sulphate of 2 grains to the ounce of distilled water being employed, 20 minims of which were injected. This was done four times—viz., at 3 P.M., 3.15 P.M., 3.30 P.M., and 3.45 P.M.; 80 minims, or about one-third of a grain of the sulphate, being injected in all. There was very little change in the condition, and as the husband was unwilling to have the injections continued I then left, asking that word might be sent in an hour or two. When next sent for I found the coma somewhat deeper, the head was thrown back, and the neck rigid. It was impossible now to make her walk about, even had the friends been willing, as there was rigidity of all the joints. If she was made to stand it was with the greatest difficulty that the hip- and knee-joints could be bent to enable her to be seated again. The injections were now recommenced, but of double the strength, 4 grains to the ounce being now used. I should mention that the respirations were now only 4 or 5 per minute and were of the Cheyne-Stokes' character, the face becoming somewhat cyanosed in the long intervals. Twenty minims were injected five times as follows: at 5.45 P.M., 6.15 P.M., 7.45 P.M., 8.30 P.M., and 9.30 P.M. By this time there was an improvement in the number of respirations. They had

increased to 9 or 10 per minute. The rigidity, too, was passing off, and freshly pounded carbonate of ammonium applied to the nostrils began to have some effect in rousing her. Just before midnight I visited the patient again and injected 15 minims, which brought the total amount injected to 115 minims, or about 1 grain of the sulphate. Next morning I was not allowed to do more than feel the pulse, the hand being thrust through the bed-curtain as at the first visit. She was then quite conscious; the pulse was 128 and she had some fever. As the bowels had not been moved and the bladder emptied since the day before taking the opium an aperient with some quinine was prescribed. I heard no more of the case for a week or two, when I was told that by the afternoon of the day of my last visit the patient was perfectly well. The total amount of sulphate of atropine injected was about 1½ grain. The patient had at one time smoked opium, but according to the statement of her friends had given up the habit about a year ago.

Amoy, China.

NOTE ON THE PREVENTION OF LARGE MAMMARY ABSCESSES BY EXPRESSION OF THE MILK.

By WALTER G. SPENCER, F.R.C.S. Eng.,
SURGEON TO THE OUT-PATIENTS AND TO THE THROAT DEPARTMENT, WESTMINSTER HOSPITAL, ETC.

UNFORTUNATELY cases of large mammary abscesses are seen too often in the wards of a general hospital. A woman has been exhausted by the previous pregnancy and lactation and is usually more or less worried about her family. Generally more than one incision has to be made, the sinuses are long in healing, sometimes the removal of the whole breast has been required, and even after healing the scars which remain may become later the site of cancer. Doubtless with proper care the breast need never become so over-distended, but when it is beyond the powers of suction to empty it the application of hot fomentations, poultices, or belladonna plaster is surely a mistake, for all the secondary ducts must quickly become converted into abscess cavities unless the milk be first removed. Professor Tarnier some years ago devoted a clinical lecture to the subject. I have had some half a dozen cases during the last two years among the out-patients at the Westminster Hospital. In all instances the breasts were extremely distended, lactation having been recently interrupted; the skin over the breast was, however, still free from induration, so that the full ducts could all be felt. By the forcible expression of half to a pint of milk suppuration was prevented. In two of the cases nitrous oxide gas was given; the other patients bore the pressure without an anæsthetic. Taking the breast in the hollow of the hands and increasing the pressure very gradually and as uniformly as possible there first oozed from the nipple a few drops of whey, then a small plug of curd, followed by a stream of milk. From each duct a plug of curd had to be driven before milk came. Finally, there issued streams of milk in many directions as water from the rose of a gardener's watering-pot. Directly milk flows tension is relieved and further pressure does not cause so much pain. The amount of pressure required when the breast was so over-distended as in the cases alluded to indicated clearly that suction would have been quite inadequate, whilst the fact that each duct was plugged by curd showed why the milk was retained and how inevitable must have been decomposition and suppuration. In my last case a small areolar abscess had already formed and blocked the nipple by its pressure. The abscess was opened under nitrous oxide gas and nearly a pint of sweet milk expressed. No further suppuration ensued. Afterwards the women have been ordered to foment and to squeeze the breast frequently and to take iodide of potassium for a few days.

Brook-street, W.

RUPTURE OF THE TERMINAL EXPANSION OF THE EXTENSOR COMMUNIS DIGITORUM.

By F. G. WALLACE, M.B., B.C. CANTAB., ETC.,
LATE NON-RESIDENT HOUSE PHYSICIAN TO ST. THOMAS'S HOSPITAL, ETC.

ALTHOUGH perhaps coming under the head of "minor ailments" I think that the following case is interesting, partly from its rarity and partly from its causation.

A woman aged twenty-nine years came to me on Christmas Day, 1895, complaining of inability to completely extend the terminal phalanx of the middle finger of the left hand. She alleged that a few hours previously, while pulling up her stocking, in some way she caught the finger and heard a snap, although she felt no pain. On her attempting extension the terminal phalanx formed an angle of 135° with the rest of the finger. There were tenderness and swelling over the back of the joint and some pain over the middle of the dorsum of the middle phalanx. It was put up in a splint, with the terminal phalanx as far as possible in a state of hyper-extension. Though the patient removed the splint several times, it was reapplied each time and kept "on" for about ten days, after which a splint with a spring which pressed back the terminal phalanx was worn for a fortnight. Some improvement has resulted, attempted extension now producing an angle of 160°. Some tenderness over the dorsum of the middle phalanx still remains.

Earl's-court-road, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

EPILEPTIC HEMIPLEGIA; VERY NUMEROUS FITS OF JACKSONIAN TYPE; RECOVERY.

(Under the care of Dr. CHARLTON BASTIAN, F.R.S.)

SOME of our readers may recollect a lecture by Dr. Bastian[1] which was published in THE LANCET on the subject of Epileptic Hemiplegia. In that lecture he included two distinct classes of cases under this head. There are, first, the cases referred to in a previous lecture, in which a very brief and temporary hemiplegia is apt to follow certain severe attacks of unilateral convulsions, the hemiplegic condition in these cases being presumably due merely to vascular spasms plus certain molecular changes in definite parts of the brain. Secondly, there is the much more formidable group of cases in which we have to do with distinct and obvious organic lesions in the brain, giving rise both to the epileptiform mode of onset and to the more persistent hemiplegic condition. Dr. Todd wrote on this subject. Our readers will also find interesting contributions by Dr. Hughlings Jackson,[2] Sir J. Crichton Browne,[3] and Dr. Kelley.[4] For the notes of this case we are indebted to Dr. Harold C. Way, house physician.

A married woman aged fifty-three years was admitted to the hospital on Nov. 23rd, 1895, paralysed on the left side of the body. She had had influenza in the previous March, which was followed by constant headache and occasional vomiting lasting for a period of five or six weeks. She then went away for three months and returned to her home in August almost quite well. After this the pain over the whole of the top of her head gradually became worse, but there was no sickness. On Nov. 9th she complained of tingling and numbness in the left arm and on the left side of the face. On waking in the morning of the 10th she found she was completely paralysed on the left side of the body. On the 11th she had a fit with twitching which was confined to the left side of the body. Similar fits were said to have recurred daily in batches until the date of admission. There was a history of insanity in the family, and four years ago her friends said she was completely "off her head" for some months which they had attributed to family troubles. Since then she had been mentally dull and childish. There was no history of syphilis, and previously her health had been good. On admission her condition was as follows. She was constantly muttering and crying out with pain in her head; the pain was not localised and there was no

[1] THE LANCET, June 20th, 1874.
[2] Medical Times and Gazette, 1881, vol. i., p. 185.
[3] THE LANCET, Aug. 15th, 1874.
[4] Medical Times and Gazette, 1878, vol. ii., p. 216.

tenderness. She was very emotional, crying when spoken to, and she could not give rational answers to questions put to her. She had also a number of delusions, still thinking she was in her own home &c. The pupils were unequal, the left being much larger than the right, but they reacted well to light. The ocular movements were good in all directions. There was complete left hemiplegia, with some rigidity of the left arm and leg. The left naso-labial fold was more marked than the right, but the left angle of the mouth was raised badly when the patient showed her teeth. The tongue protruded markedly to the left. The plantar reflex was absent on the left side, but present on the right. The knee-jerks were exaggerated on both sides; there was no ankle clonus. Sensibility could not be satisfactorily tested owing to the patient's dull mental condition, but sensation to pain was not lost. Muscular sense seemed, however, to be lost in the left limbs, as the patient continually cried out to have her arm and leg "put down" while they were already straight down in the bed. The heart and lungs were normal. There was nothing unnatural in the urine. The pulse was 86, regular and of low tension; the temperature was not raised. There was no vomiting whilst she was in the hospital; and there was no optic neuritis. During the first three days after admission the patient had from ten to fifteen fits daily, mostly occurring in batches during day and night. For the next three days the fits were less numerous and slighter, and none occurred after the 29th, on which day she had three slight attacks. All the attacks were similar in character. They commenced with twitching at the left angle of the mouth, which slowly spread up the face, then extended to the fingers, arm, and shoulder, and next to the toes, leg, and hip of the left side. Occasionally in the more severe fits the convulsion spread to the right side of the body. The whole body then became rigid, the legs and arms being flexed; the rigidity was more marked on the left side. The head and eyes also were strongly turned to the left. Consciousness was not lost during the fits, the tongue was not bitten, and there was no micturition. The last fit occurred on Nov. 29th, and on the following day she was able slightly to move her left leg. In the course of the next three days she rapidly regained power in the paralysed limbs and face, whilst muscular sense was simultaneously restored. On Dec. 16th the patient got up and was able to stand and walk fairly well. There was no dragging of the left leg and the left grip was fairly good. Her mental condition still remained weak, but there were no delusions. When first admitted syphilis was suspected, and she was put upon a mixture containing potassium iodide and liquor hydrargyri perchloridi. After a few days this was omitted and she was given three times a day a draught containing ten grains of chloral and twenty grains of bromide of potassium. After Dec. 14th she took only a draught containing twenty grains of bromide of potassium every evening.

Remarks by Dr. BASTIAN.—When first admitted pachymeningitis or a growth in the right Rolandic area was suspected to be the cause of the patient's symptoms. After a few days, however, the absence of optic neuritis, of vomiting, and of any localised pain or tenderness made this notion improbable, and it was supposed that the patient was suffering from thrombosis of the first, second, and third branches of the right cerebral Sylvian artery supplying the Rolandic area. It was thought that this occurred in the night of Nov. 9th, as premonitory tinglings had been felt during the day on the left side of the face and in the left arm, whilst when the patient awoke the next morning she found herself paralysed on that side. On the following day (Nov. 11th) she had the first fit, and the fits very frequently occurred daily till Nov. 29th. They were typical attacks of "Jacksonian epilepsy," always beginning and spreading in the same way, and sometimes involving the opposite side of the body, though even then they were unassociated with loss of consciousness. One of the most interesting features about this case was the very rapid way in which the paralysis (and with it the loss of muscular sense) cleared up after the cessation of the fits. This of itself showed that the hemiplegic condition could not have been produced by a cortical hæmorrhage, and led to the supposition that the amount of thrombosis in the branches of the right middle cerebral artery must have been small and perhaps associated with a fit in the night of Nov. 9th (thus initiating the hemiplegia); or else, if larger at first, that it must have become partially resolved and partially compensated for by the establishment of a free collateral circulation. These cases, in which Jacksonian fits are occasioned by vascular occlusions, are sometimes very difficult to diagnose from cases of new growth in or just beneath the Rolandic area, an instance of which occurred in my practice at the National Hospital for the Paralysed and Epileptic, Queen-square, about two years since, in the case of a girl suffering from double mitral disease.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Discussion on the Parasite of Malaria.

AN ordinary meeting of this society was held on Feb. 25th, Mr. HUTCHINSON, President, being in the chair.

The adjourned discussion[1] on the Parasite of Malaria was reopened by Dr. GEORGE THIN, who read a note on the Appearances found in the Tissues of a Fatal Case of Pernicious Malaria at Sierra Leone. The tissues examined were from a patient who died from pernicious malarial fever at Sierra Leone after being four days under observation. The temperature was 100° F. when he was first seen; during the night it rose to 106·2°. On the second day it was 98·4°. On the third day it rose to 106° and was brought down by treatment to 102·4°. He died on the morning of the fourth day. The cerebral functions were disturbed when he was first seen and he soon became comatose. Dr. Thin was indebted to Surgeon-Captain Duggan for sending him portions of the tissues. *Brain:* The vessels of the pia mater were congested, with some colloid-looking plugs penetrating the surface of the brain apparently in the tracks of the vessels. The substance of the brain itself seemed to be little changed, but the blood-vessels contained many parasites of malaria. The large vessels contained very few and many none at all, but the small vessels contained many parasites, and many capillaries were filled with them. The parasites were in the red corpuscles and were found in all stages of development. The most numerous forms were those which were in a very early stage, appearing as little more than a stained point in the centre of the red corpuscles. Others were of an intermediate size, occupying an appreciable extent of the corpuscle. Others, much fewer in number, had a comparatively large mass of central pigment and almost entirely filled the red corpuscles. The tissues not being in a perfect state of preservation the finer structure of the spores of the mature parasite could not be observed. Spores in various stages, from the smallest forms to those of central pigment, could sometimes be found in the same vessel. Some of the endothelial cells of the vessels contained pigment. *Spleen:* All the sections examined contained many white corpuscles laden with pigment. These pigment-bearing cells were most numerous in the spleen pulp. Many of the very large white corpuscles which contained considerable blocks of pigment were evidently undergoing degeneration, their nuclei being scarcely susceptible of staining. A few of the white corpuscles contained, in addition to small pigment spheres, red blood-corpuscles with parasites in their interior. The small lymphoid cells of the spleen did not contain pigment, and very little of it was observed in the Malpighian corpuscles. The red blood-corpuscles in the spleen contained very few parasites. Several were observed after a long examination. They were in an early stage. Large white corpuscles containing pigment were observed in the veins. *Bone marrow:* In a few sections of bone marrow examined some white corpuscles containing pigment were observed, but they were few in number compared with those in the spleen. No parasites were observed in the bone marrow. The marrow was from a rib. *Liver:* Parasites were not observed in the liver so far as the examination had gone, but it presented much pigment. The pigment was contained in large white corpuscles in the interlobular network. In some parts the liver cells contained pigment. Apart from the deposit of pigment the liver seemed normal. *Kidney:* All the structures of the kidney in the parts examined were normal except the convoluted tubes. In these tubes the epithelium was swollen and granular; some cells were broken down and in many of those which were

[1] The report of the previous discussion was published in THE LANCET of Feb. 15th, 1896.

still entire the nucleus refused to stain. These were in marked contrast to the straight tubes, which were quite normal. The glomeruli presented nothing abnormal. A few cells containing pigment were observed in them. There were no evidences of an interstitial congestion, the morbid appearances being limited to those of an acute catarrh of the convoluted tubes. No parasites were found in the tubes, and extremely few were observed in the red corpuscles in the vessels. The appearances suggested that the toxic products of the parasites whilst being eliminated by the kidney had exercised a destructive effect on the epithelium of the convoluted tubes. All these appearances were similar to those described by Marchiafava and his pupils in the pernicious fever of Southern Italy. Microscopical preparations illustrating the points referred to were shown.

Dr. JOHN ANDERSON referred to a very valuable paper in the Johns Hopkins Hospital Reports for last year, in which were recognised the usual types of malarial fever associated with three forms of parasites. The quartan parasite took seventy-two hours to develop and the tertian forty-eight hours. With regard to the æstivo-autumnal form, the authors of the paper (Dr. Thayer and Dr. Hewetson) say that its period of development varies from twenty-four hours or less to forty-eight hours or more. The fevers associated with this organism vary greatly in their clinical features. Their accounts did not agree with Dr. Thin's drawings. They thought that it was associated with the crescentic form of parasite, and the latter they regarded as a development from a small hyaline body. Assuming the correctness of Laveran's theory, Dr. Anderson discussed the following three points: (1) the period of incubation; (2) the length of time which the parasite could remain latent; and (3) its means of access to the body. Some writers thought that the period of incubation was short, and Laveran had placed it at from six to ten days. In this connexion it should be remembered that some sudden seizures might really be due to heat apoplexy, in which the hypodermic administration of quinine had often proved useful. The length of time during which the fever might remain latent varied in an extraordinary degree. In one case the malaria occurred nineteen years after the exposure to a last attack. In a case under his own observation an officer resided at Peshawar for five years and had no fever there, but after his return to England he suffered from ague like the ague of the Peshawar Valley. It was not fair to assert that a fever was not malarial because a parasite was not found. He quoted an instance in which in a battery of horse artillery every man was attacked. A patient who left China twenty-three years ago and had not resided in a malarial country since still suffered from malaria occasionally. Another patient suffered from brow ague, and yet it was forty years since he left a malarial country; this brow ague yielded to the free use of quinine. He next discussed the method of propagation—whether by air, water, or mosquitoes. When soil had been turned it had been noticed that people had been attacked who lived in houses in a line with wind blowing from this soil. There were several cases to support the water-borne theory. There was certainly less disease at Peshawar since better water had been introduced. Water served as a vehicle not only as water drunk but in the form of inspired watery vapour. He thought that a point against the mosquito theory was this, that as a rule the recent arrivals in India suffered most from mosquito bites, while those who had been there a little time appeared to suffer most from malaria. Cases of malaria with cholera features were sometimes difficult to discriminate; the malaria had a much less mortality than cholera; the disease was not epidemic, and it was cured by quinine. In Central India in three years six cases of severe sudden intestinal hæmorrhage occurred; two of them died, but no intestinal ulceration was found. He appreciated the prophylactic action of quinine in malaria, and he recommended the administration of a small dose of quinine daily. The hydrochlorate of quinine was the most suitable preparation, and if administered subcutaneously with antiseptic precautions gave rise to nothing but slight local pain. He had found iodine and arsenic valuable.

Dr. MANSON said that he agreed with Dr. Thin in the main, but he thought that he had attempted too much. He did not explain sufficiently clearly what he meant by "sterile" form, and he thought that the forms which had been so described were not natural, but factitious, and due to the rupture of the blood corpuscles and the escape of the parasite. Sometimes a parasite escaped voluntarily as a vital act and then gave birth to flagella; sometimes double infection of a corpuscle happened and conjugation of the parasites took place. He did not think that the mosquito acted as the intermediary host, for these parasites passed from one definitive host to another. The flagellate bodies appeared in the blood only when the latter had escaped from the vessels; they were the homologues of spores, and they swam about free from the parasite. The function of these bodies lay outside the human organism, and they were taken outside by something that preyed upon the blood, and most likely the mosquito was the agent required for giving the parasite the opportunity for continuing its life history outside the body. In the mosquito the crescent bodies developed flagella, and those broke free and swam about in the blood in the mosquito's stomach. The parasite of the pigeon was specifically different from that found in the human body. He could not entertain the idea that the flagellar movements were "death agonies," for the movements were most life-like. He knew from personal observation that mosquitoes did bite birds, and canary-fanciers in India were in the habit of protecting their charges with a mosquito-curtain at night. In favour of the water-borne theory was the fact that the natives would point to certain wells as sources of malaria. He believed that the malaria parasite died in a very short time, for epidemics ceased soon. He concluded by deprecating the study of these organisms from the bacteriological standpoint. It was a protozoon, and it was not necessary to study the stained parasite when the living animal could be obtained to look at. He showed under the microscope some specimens to illustrate his views.

Professor CAYLEY (Netley) said that he had come to hear something more of the relation which a special form of parasite bore to a particular variety of malarial fever, but he had heard very little that was certain on that point. He believed that all the varieties were but modifications of the same parasite; similarly all the forms of malarial fever were but modifications of one type, modified by climate, temperature, the quantity of the parasite introduced, its virulence, and the power of resistance of the individual. In all the varieties of the fever one particular form of microbe was invariably found—the amœba; two or three in a field might assume the rosette form and sporulate, and thus give rise to another generation of microbes. The differences of shape he believed to be accidental, the sporule might gradually become pigmented, and the pigment be aggregated or scattered. Most of the flagella appeared to be found when the fever had taken on a chronic form. With regard to the influence of quinine he believed it should be given in the sweating stage and repeated in the next few hours; this prevented recurrence. It never would prevent an attack if given before it. As to the prophylactic action of quinine he believed in giving a five- or ten-grain dose every morning, and the late Surgeon-Major Parke found it simply invaluable when used in Africa this way.

Brigade-Surgeon-Lieutenant-Colonel TEMPLE WRIGHT said that he had served with Indian regiments composed of different classes of natives, and could say that malarial fever was the chief cause of invaliding, and most of the soldiers admitted to hospital had large spleens. He believed that exposure had a good deal to do with the exciting cause of malaria. In treatment he believed that antiscorbutic measures were useful when combined with quinine.

Dr. GALLOWAY said that he intended to criticise Dr. Thin's able paper from the biological point of view. He thought that the study of the protozoa was still in its infancy and that we had only histological examination to rely on, and therefore he deprecated dogmatic statements with reference to the stages of these organisms, especially when such statements referred to negative results. The experience gained in the study of coccidium oviforme should not be lost upon investigators. The statements as to the movements of the flagella being such as to indicate approaching death were not accurate from the point of view of actual observation; he had convinced himself that this was a vital and not a degenerative process.

Brigade-Surgeon SCRIVEN discussed the subject principally from the therapeutic point of view and said that the chief difficulty in India was to decide whether the fever was typhoid or malarious, and perhaps the parasite would help to decide this point. He quoted a remarkable effect of change of air. A patient living in a malarious district and catching malaria might move to another more malarious district and yet get rid of his malaria. This seemed to point to a parasite of a different kind. He concluded by quoting some evidence that the disease might be contracted through water.

Dr. THIN replied, chiefly concerning himself with a defence of his views against the criticisms which had been levelled at them. He gave assurances that the facts recorded in the conjoint paper were all recorded in good faith and the microscopical results were attached to the cases afterwards without any attempt to fit them together. He thought that a point against regarding the flagella as the equivalents of spores was the fact that they possessed no nucleolar elements.

MEDICAL SOCIETY OF LONDON.

Causation and Treatment of Obscure Renal Pain.—The Pain of Renal Stone.—Demonstration of the New Shadow Photography by Roentgen's "X" Rays.

AN ordinary meeting of this society was held on Feb. 24th, the President, Sir J. CRICHTON BROWNE, being in the chair.

Dr. RALFE read a paper on the Causation and Treatment of Obscure Renal Pain. He observed that the question that was put before the society that evening was that of dealing with obscure forms of renal pain, and to discriminate between those forms of nephralgia which called either for surgical or medical treatment. Dealing chiefly with the latter class of cases Dr. Ralfe would divide them into four groups:—1. Reflex nerve disturbance giving rise to kidney pain, such as happened in valvular disease of the heart, particularly lesion of the valves; also in thoracic and especially abdominal aneurysms. Nor should the reflected pains from hardened masses of scybalæ be forgotten, especially those lying in the descending colon where it crossed the left kidney. 2. The aching kidney was generally associated with movable kidney, but that in this communication was ruled out of line because it fell among the surgical cases. But other forms of aching kidney existed which required the attention of the physician, such as, for instance, the contused kidney, which might arise from a very slight cause and gradually grow worse from neglect. Such a case Dr. Ralfe quoted of a young woman who wore her corset too tight and was much given to golf, lawn tennis, and hunting; in one of these amusements she gave herself a violent upward strain which almost caused syncope. She was carried home, and after a few days, feeling better, she sat up, but had to go to bed again; as she was very impatient of bed treatment she had frequent relapses. Another cause of aching kidney was the excess of normal constituents of the urine, such as urea and undue acidity. As regarded the first, Dr. Ralfe quoted a case of a patient with extreme azoturia who suffered such aching pain in his left kidney that one physician diagnosed it as due to calculus and another to cancer. As the azoturia disappeared the violent pain left the kidney. The second case was sent into the hospital, with violent colic, painful micturition, and shooting pains down the groin. An immediate operation was considered necessary. As no morbid signs appeared in the urine Dr. Ralfe postponed the operation till the next attack of colic asserted itself, and the urine was again found normal, but highly acid. He placed the patient on citrate of potash and buchu and on regular doses of distilled water every three hours; under this treatment the colic, which at first had recurred about every second day, gradually disappeared. 3. Acute gouty paroxysms of the kidney. Dr. Ralfe referred to a remarkable case which occurred to Professor Virchow,[1] in which a patient was seized with a sudden attack of pyæmia; the urine became fully purulent and under the microscope gave evidence of innumerable crystals of uric acid. Dr. Ralfe also related the case of a man who had never had gout before in his life, but had frequent attacks of renal colic with blood and pus and uric acid crystals. After lasting four years these attacks passed off, only to be succeeded by a severe form of rheumatoid arthritis. Another patient who had previously had no evidence of gout lost all her colicky symptoms on taking citrate of potash and buchu and distilled water continuously. 4. Diseases of kidneys which showed no determinate symptoms, such as blocking of a ureter with a tightly impacted calculus and preventing the passage of symptomatic urine into the bladder; but here the fact of no morbid urine passing for some time would exclude tuberculous disease, which had been suspected sometimes, also a progressive enlargement of the kidney would show that either hydronephrosis or pyonephrosis was taking place. Sudden suppression of urine might often lead to doubt. In the instance of single kidney the diagnosis was not usually difficult, since anatomical knowledge was now so correct. But in cases where both kidneys were simultaneously obstructed, especially when unattended with colic or any marked symptoms, it often became difficult to decide upon a line of action, since the suppression might be caused either by nervous suppression or acute congestion of the kidney. A young woman aged twenty-seven woke one morning unable to pass urine, but had no other symptom except a little indefinite backache. This state of things continued for four days without any apparent change in the patient; but on the fourth day the pulse showed signs of intermittency, and it was then agreed to explore one of the kidneys. In the pelvis of the kidney was a thick, gritty deposit, accompanied by a stone in the ureter. A similar condition was found in the other kidney when opened a fortnight afterwards. The other case was that of a young man aged twenty-four, who left home feeling perfectly well. On reaching his place of business he was seized with sudden pain across the loins and a violent desire to micturate, and then voided an immense quantity of bloody urine. After this he felt great relief, but passed no more urine all that day, and came to the hospital on that account. When Dr. Ralfe saw him two days later on his visit not a drop of urine had been passed, and, thinking it possible it might be a case of double impaction, he requested his surgical colleague to see the patient, who decided, as there were no urgent symptoms present, to defer an immediate operation. The next morning the patient began to pass bloody urine, and continued to do so till it became clear, and he made a good recovery. It was interesting that as soon as the hæmaturia recurred a slight œdema set in. Dr. Ralfe attributed the previous absence of this symptom, and also of pain and pyrexia, to the severe hæmorrhage that ushered in the attack.

Mr. HURRY FENWICK read a paper on the Pain of Renal Stone. He brought forward a series of uncomplicated nephro-lithotomies to account for the difference which appeared to exist in the character and severity of the pain produced by stone in the kidney. He asserted that uncomplicated stones in the kidney could be divided into three classes: (*a*) those lying loose in the pelvis, (*b*) those under the capsule lodged in the cortex of the kidney; and (*c*) those contained in the fleshy part of the kidney (the columns of Bertini or Pyramids). The pain and suffering in loose pelvic stones were usually typical. They evoked colics, radiations, and often bladder symptoms. The cortex stones did not evoke colics, radiations, or bladder irritability, but merely a severe fixed pain. The intermediate group (the parenchymatous class) partook of the characters of both, for the hollows in which they lay often communicated with the pelvis by fine channels. One prominent symptom seemed in many instances to separate the embedded stones from the pelvic stones. In the cortical stones the patient was forced to sleep on the kidney in which the stone was lodged, but could not turn without pain on to the healthy side. Often in the pelvic stones the patient lay on the kidney of the unaffected side. Another sharp line of difference between the cortical and the pelvic stones was to be found in the urine. Pelvic stones usually caused pus in the urine within a year or so, but the cortical stones did not change the character of the urine even after twenty or more years.—Dr. C. W. CHAPMAN asked if the frequency of micturition could be used to discriminate between cortical and pelvic stones.—Mr. SWINFORD EDWARDS referred to a case in which he had recently removed a large stone from the kidney. It was not waterworn and was believed to have been embedded in the cortex. There had been hæmaturia two years ago, but not since, and the patient complained of fixed pain in the loin.—Mr. HURRY FENWICK, in reply, said that cortical stones did not produce symptoms referable to the lower urinary tract.

Mr. SYDNEY ROWLAND then gave an admirable demonstration of the New Shadow Photography by Roentgen's "X" Rays. He began by explaining the nature of the electrical discharge used and exhibiting the structure of a Crookes's tube. Many slides were shown in the magic-lantern to illustrate the applicability of the process, and finally several photographs were taken of objects, such as penknives, pince-nez, toothpicks, &c., and of the hands of two or three Fellows of the the society. These were developed in the room, and the negatives were shown on the screen before the close of the meeting.

[1] Berliner Klinische Wochenschrift, No. 1 1884.

HARVEIAN SOCIETY OF LONDON.

Pneumonia.

A MEETING of this society was held on Feb. 20th, Mr. J. KNOWSLEY THORNTON, President, being in the chair.

Dr. J. EDWARD SQUIRE read a paper entitled "Some Clinical Remarks on Pneumonia," alluding first to the influence exerted on the production of pneumonia and on the course of the disease by the conditions of the lung tissue—modifications in the "tissue-soil" which allow of the growth of micro-organisms. It is on the character of this change in the tissues that the individuality of each case of pneumonia depends. Though chill is the common determining cause of pneumonia, fatigue or debility after illness renders the risks from chill greater, and in this connexion a case was quoted where pneumonia followed a chill during convalescence from measles. The not infrequent occurrence of pneumonia as a complication of enteric fever introduced some remarks on the importance of deciding in any case of pneumonia whether the lung mischief fully explains the course of the illness as well as the existing symptoms. The occurrence of pneumonia has sometimes delayed the recognition of the disease of which it was merely a complication. The peculiarities of the pneumonia of influenza were referred to and the influence of malaria on pneumonia was discussed. Whether or not malaria predisposes to pneumonia there seems little doubt that the cachexia left after malarial poisoning adds to the danger of a subsequent attack of inflammation of the lung. The question whether acute congestion of the lung is a definite illness or whether the cases so described are not, in fact, cases of pneumonia was then considered. Pneumonia may prove fatal before the lung consolidation is complete, and, on the other hand, resolution of the pulmonary exudation may occur before it has coagulated. In both instances the signs and symptoms of pneumonia are not fully declared, and when recovery takes place in the first stage of the pneumonic process the term "abortive pneumonia" may be used. Instances of divergence from the usual course of the disease were then mentioned, and some of the more important complications and sequelæ were illustrated by cases which had come under the speaker's observation. Pneumonia of the apex sometimes gives rise to difficulties in diagnosis, especially with reference to the presence or absence of tuberculosis. In the management of pneumonia Dr. Squire strongly advocated a stimulant line of treatment from the first, for the exhaustion which constitutes so great a danger may be more easily prevented than counteracted. The necessity for a plentiful supply of nourishment, which must be administered frequently in small quantities, makes good nursing essential. The good results obtained by the inhalation of oxygen in certain cases, and the relief following a tepid bath in one instance, were also referred to. In conclusion Dr. Squire remarked that though there may be some general principles of treatment in all cases of pneumonia the details must depend upon the individual peculiarities of each case.

Dr. BOXALL had met with several cases of acute lobar pneumonia in connexion with childbirth, cases in which there was not the slightest suspicion of septic complication as all of these occurred in hospital practice where the septic element could be completely eliminated, but the removal of the patient to the hospital during labour entails a considerable risk of chill, and the labour itself is necessarily attended with fatigue. Acute lobar pneumonia like many other febrile diseases, and especially those known as "acute specifics," often led to premature delivery or to miscarriage. These cases also, if septic contamination be avoided, seemed to do well. As soon as delivery or miscarriage occurred not only did the general condition of the patient become no worse—on the contrary it often improved—but the local manifestation of the disease, the lung consolidation, often rapidly improved also—an effect probably due to the inevitable loss of blood.

Dr. EDWARD GRAY said that in an apparently hopeless case of pneumonia he determined to try oxygen as a last resource. When he returned to the sick room with a cylinder containing from thirty to forty cubic feet of that gas, the nurse remarked, "It's all over, doctor." The patient's breathing had, in fact, ceased and there was no reflex action on touching the conjunctiva. There was no time to examine the heart, but no pulse at the wrist or temporal artery was perceptible. Dr. Gray put the apparatus together, applied the mouthpiece, turned on the gas, compressed the patient's chest at regular intervals, and eventually was rewarded by respiration being re-established. The patient gradually improved from that hour, and is now as well and strong as ever he was. In a case of pneumonia following influenza Dr. Gray found that the apparently long continuance of the rusty-coloured sputa was due to the habit of sucking "Spanish liquorice" for the relief of the cough.

Dr. COCK mentioned that oxygen seemed to act not only as a stimulant and restorative, but also as an expectorant of great value. When living in a malarious English district he found that the type of pneumonia was of a particularly fatal character, and he recollected the case of a soldier invalided home for malarious Egyptian fever who developed rapidly fatal pneumonia in consequence of a chill.

Mr. HAZEL said that he had recently treated a bad case of pneumonia attended with great debility occurring in a medical friend aged seventy-five years. Alcoholic stimulants (whisky and brandy) were taken to the extent of twelve ounces in twenty-four hours, and both he and the patient largely attributely the eventual recovery to their use. Strophanthus and nux vomica (which are preferable to digitalis and strychnine) were also taken, together with iodide of potassium to aid resolution.

Dr. G. A. SUTHERLAND referred to the inverted type of breathing which was frequently present in pneumonia and might prove an aid in the diagnosis of obscure cases. The respiratory cycle was altered from the normal sequence of inspiration—expiration—pause, to expiration—inspiration—pause. The fresh air was thus retained in the lungs as long as possible and the demand for more oxygen was supplied.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—The Permanent Cure of Anteflexion by Operation.—Clinical Notes of Gynæcological Cases from a Provincial Hospital.

A MEETING of this society was held on Feb. 13th, Dr. CLEMENT GODSON, President, being in the chair.

Mr. BOWREMAN JESSETT showed the following specimens: (1) Advanced Uterine Carcinoma treated by Chloride of Zinc Caustic; and (2) Hæmorrhagic Cyst of the Ovary filling the Pelvis, with Adeno-carcinoma of the Uterus—panhysterectomy and recovery.—The PRESIDENT was much interested in the first case because the patient had first come to consult him, and in spite of age he felt justified in holding out to her hope of cure by the operation which Mr. Jessett had performed. It was too soon to speak of the ultimate results, but much had already been gained by the relief of her symptoms and by the hope of cure which she now had.

Dr. GEORGE ELDER (Nottingham) showed: (1) a specimen from a Case of Supra-vaginal Hysterectomy performed during Pregnancy for threatened Intestinal Obstruction; and (2) a Large Fibroid increasing rapidly after Marriage. The second specimen was shown by way of contrast to the first. In the first case the patient was aged thirty-seven years and had been married three years. This was her first pregnancy, and she had never suspected that she had pelvic mischief, but she had suffered greatly from constipation. When about four months advanced in pregnancy, the constipation having gradually got worse, she was one day seized with violent sickness and intestinal obstruction set in, so that between Dec. 12th and Jan. 1st the bowels were only relieved three times. Examination showed a mass rising into the abdomen; the central part seemed like the pregnant uterus, on the left was a large irregular mass, and on the right was a second mass which seemed more closely connected with the parent tumour. By the vagina the cervix was felt high up and pressed to the left by a mass blocking the pelvic outlet. The abdomen was opened and the uterus amputated above the cervix, the peritoneal edges being brought together over the stump. The parietal peritoneum was brought together round the stump. There was some hæmorrhage from the stump eight hours after the operation; convalescence was otherwise satisfactory.—The PRESIDENT asked whether, the obstruction being partly relieved, it would have been possible to allow the pregnancy to go on till a later stage, a Porro's operation being then performed.—Dr. BANTOCK and Mr. BOWREMAN JESSETT endorsed Dr. Elder's action in operating without delay.

Dr. GEORGE KEITH read a paper on the Permanent Cure of Anteflexion by Operation, in which he advocated the performance of Dudley's operation, the object being to fix the cervix backwards and thus bring the cavity of the body of the uterus and the cervix in a straight line. The method is as follows: the whole thickness of the posterior lip of the cervix is divided directly backwards; each of the two cut surfaces is bent on itself and fixed in this position by stitches. Dr. Keith gave the history of several cases, of which the following is an example. A single woman aged twenty-seven years had never menstruated without severe pain, sickness, and headache; there was much trouble with the bladder, as during the periods she had to pass urine as many as thirty times in the twenty-four hours. She was operated on in October, 1895. Since then the patient has had three periods which have been normal in every respect, and there is now no trouble with the bladder.—The PRESIDENT said that in his own experience dilatation up to No. 16 had afforded exceedingly good results.—Dr. SKENE KEITH said that he had performed the operation about twenty times. In four out of five cases cure followed, and the rest were relieved, and he thought the method was then, perhaps, responsible for the incompleteness of cure. He had, therefore, slightly modified the operation by making the division more complete, so as to allow the uterus to assume a straighter position. He thought his brother's operation was a real addition to their knowledge of the means of treating anteversion.—Dr. HEYWOOD SMITH and Dr. BANTOCK also spoke.

Mr. E. F. ELIOT (Southampton) read a paper entitled "Clinical Notes of Gynæcological Cases from a Provincial Hospital." He referred to the difficulties which practitioners in a provincial town experienced in dealing with gynæcological cases requiring special knowledge and training when there was no opportunity of obtaining the opinion and help of men specially qualified for this kind of work. He read the notes of a number of cases of abdominal section, chiefly for ovarian and tubal disease. The cases were illustrated by pencil and water colour drawings of the diseased structures.—The PRESIDENT thanked Mr. Eliot for his paper and congratulated him on his results.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Heart Disease.

A MEETING of this society was held on Feb. 19th, Dr. MUTCH, President, being in the chair.

Dr. HANDFORD read a paper reviewing 500 cases of Heart Disease from his notes of hospital and private cases for the past ten years. The chief points to which he called attention were as follows. He first mentioned the influence of over eating and drinking in causing heart disease by inducing persistent high blood tension and consequent arterio-sclerosis. Alcohol, even in what is usually called moderate quantity, shares with tea, coffee, and tobacco the disadvantage of raising the blood pressure. Spirit-drinking may cause acute dilatation, while excessive beer-drinking may bring about the same result more slowly, largely by the bulk of fluid imbibed raising the blood pressure. Patients with heart disease should be moderate in the consumption of even bland fluids. In anæmia dilatation is compensated by hypertrophy, but enlargement often remains permanent. Such is the case also in dilatation from over-exertion. But an important element in all prognosis is the original size and quality of the heart and vessels. Successful athletes have been endowed with hearts above the average in size and quality. It is not only a great disadvantage but even a danger shortening life for a patient with heart disease to grow very fat. Besides the risk of fatty overloading of the heart the increased weight of the body throws an extra strain on the heart, and more pumping power is required to keep up the circulation over the extended area. In treatment the first question to decide is what cases are best left alone. Next, are the symptoms complained of due to an existing heart lesion or to some other and more obscure cause? Among cardiac tonics the pre-eminence of digitalis has not been in any way shaken by its numerous recent competitors; but its action seems sometimes to be capricious, and there are numerous cases, especially of aortic regurgitation and of mitral stenosis, where it evidently does harm. The key to the right understanding of these apparently contradictory cases lies in the proper appreciation of the action of digitalis in contracting the small arterioles and raising the blood pressure. This is a well-known and important effect of digitalis, but is only too generally overlooked.

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases and Specimens.—Residual Lymphadenitis.

THE fifth ordinary meeting of this society was held on Feb. 5th at the Medical Institute, Birmingham, the President, Dr. UNDERHILL, being in the chair.

Dr. WOOD WHITE showed a young man in whom a Soft Swelling, in many respects resembling a tumour, had developed in the scar of a bite from a horse.

Mr. HASLAM showed a Uric Acid Calculus nearly an inch and a half in length and forty grains in weight that he had removed from the urethra of a man aged forty years. The patient had a stricture just anterior to the scrotum, and for about two years had had difficulty in passing urine; the stream frequently stopped suddenly, and he could feel some hard substance in the penile urethra that moved backwards and forwards. On pushing this back he could easily pass urine again. On examination a hard mass could be felt in the urethra about two and a half inches from the meatus, and on passing a probe it was found to be a stone. Just behind the scrotum the urethra was blocked by another equally hard but much larger substance. An incision was made down to this, and it was found to be part of a long stone that had been broken across towards its anterior extremity, and on passing a pair of forceps along the urethra the remainder of the stone was removed. The fracture was evidently old, for its surface was smooth. A penile stricture had prevented the stone coming to the meatus.

Mr. JORDAN LLOYD showed the Upper Extremity of a patient nearly seventy years of age, which had been amputated just below the shoulder for embolic gangrene of the hand and lower half of the forearm of eight days' duration. The wound healed by first intention and the case had progressed satisfactorily since. The case illustrated the great advantage of operating early in this form of gangrene. Mr. LLOYD also exhibited the Femoral and Iliac Arteries removed post mortem from a man seventy years of age who had died suddenly. The interest of the case lay in the fact that he had had both thighs amputated for senile gangrene, the left nearly four years and the right nearly two years before his death, his wounds healing primarily on each occasion.

Mr. CHRISTOPHER MARTIN showed an Unruptured Tubal Pregnancy removed from a young married woman aged twenty-one years. There was a history of six weeks' amenorrhœa followed by colicky pain in the left lower abdomen and irregular hæmorrhages from the uterus. A fluctuating swelling could be felt behind and to the left side of the uterus. Mr. Martin opened the abdomen and found a large intra-peritoneal hæmatocele, limited by adherent intestine. The pregnant tube was unruptured, but was discharging blood from its open abdominal end into the cavity of the hæmatocele—a condition often termed "tubal abortion." Mr. Martin removed the tube and washed out the cavity of the hæmatocele. The patient made an uninterrupted recovery.

Mr. JORDAN LLOYD read a paper on Residual Lymphadenitis, defining the term as signifying inflammation of a lymph-gland which depended on the influence of a product residual in the gland from a peripheral lesion which had long ago ended in recovery.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Roentgen's Rays.—Exhibition of Cases.

A MEETING of this society was held on Feb. 13th, the President, Dr. PORTER, being in the chair.

Professor HICKS, F.R.S., Principal of Forth College, gave a very clear account of his experiments with Roentgen's rays and showed a large number of well-defined and beautifully executed shadowgraphs.

Mr. DALE JAMES showed (1) a case of Circumscribed

Scleroderma in a girl aged nineteen years; under massage and the constant current it was rapidly improving; and (2) a severe case of Raynaud's Disease in a woman forty-four years of age. The present attack commenced last September after a miscarriage. A former attack, six years ago, was not so severe, but it involved some of the toes in superficial ulceration. There was no evidence of syphilis. The patient had rheumatic fever eleven years ago, which had left a slightly damaged aortic valve.

Mr. ATKIN showed a case of Symmetrical Gangrene (? Raynaud's Disease). The patient, a male aged thirty years, had pains in his fingers after exposure to cold and damp. The fingers then became cold and of a purple colour, turning to a deep dead black. Both feet were painful and discoloured. He had rheumatic fever at fifteen years of age. His urine contained albumin to the amount of one-half the total quantity.

Dr. ARTHUR HALL showed (1) a case of Facial Spasm; and (2) a case of Osteo-arthritis with Roentgen's shadowgraph of the hand.

Mr. SINCLAIR WHITE showed:—1. A woman aged fifty years who had symptoms of a Cancerous Stricture of the Rectum for six years. Colotomy had been performed three years after the onset of symptoms. The patient was still fairly well, and might be expected to live several years yet. 2. A man aged sixty-nine years, whose rectum had been resected nine months previously for Cancerous Stricture situated three inches above the anus. The growth, together with five inches of the rectum, was removed by the transsacral incision. The peritoneum was freely opened and the growth drawn out of the wound. A Murphy's button was used to unite the ends of the rectum. The posterior part of the rectal wound leaked, and for a time there was a fæcal fistula, but this gradually contracted. There was no evidence of recurrence, and the patient had complete control over his sphincters. He had gained two stones in weight and was stronger than he had been for years.—The PRESIDENT, Mr. SNELL, Mr. PYE-SMITH, Dr. ADDISON, Dr. STEDMAN, Dr. ARTHUR HALL, Dr. MARTIN, Dr. YOUNG, and Dr. BURGESS made remarks.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

AN afternoon meeting of this society was held on Feb. 19th.

Dr. JAMES showed (1) a boy with well-marked Pseudo-hypertrophic Paralysis; (2) a boy in whom disease of the foot had resulted in increased Irritability of the Lumbar Cord; and (3) a man who had suffered from Hydronephrosis on the left side, which he had treated with apparent success by repeated aspiration.

Mr. CAIRD showed a boy whose Thigh he had Amputated at the Hip when the patient was in an emaciated and exhausted condition from prolonged disease of the head of the femur. The success was largely attributed to transfusion of saline fluid after the operation.

Dr. LOGAN TURNER showed a woman whom he had treated with decided benefit for Laryngeal Tuberculosis.

Dr. COTTERILL showed a man with a very large Vascular Tumour of the left side of the Face, involving the cheek and forehead, and extending to the temporal region. The tumour had existed for over thirty years; it had been treated in various ways without improvement, and recently it had increased in size. After discussing the treatment he said that he would probably tie the external carotid artery.

Mr. CATHCART and Dr. G. M. JOHNSTON showed a Skull and Brain from a man with an old-standing depressed fracture which had given rise to no symptoms. The depression was in the frontal region. There had been no splintering of the inner table and no irritation at the seat of injury.

Mr. CATHCART also showed (1) a Lung with Diffuse Sarcoma; (2) a specimen of Double Backward Displacement of the Radii; and (3) a specimen of Elephantiasis from Mombasa.

Dr. BYROM BRAMWELL showed (1) drawings of a case of Cancer of the Liver in which the distribution gave rise to unusual configuration of the organ; and (2) drawings from a case of Glio-sarcoma in the Pons which had been of very slow growth.

Dr. GILLESPIE showed specimens of Albumoses from the Urine in a case of nephritis.

Dr. W. RUSSELL showed an Abdominal Aneurysm from a woman over eighty years of age, whom he had seen in consultation, the symptoms pointing to gastric perforation. The aneurysm had ruptured retro-peritoneally, the blood passed by a narrow channel into the left loin, where it formed a large clot in front of and around the kidney, and carried the descending colon and peritoneum forward to the anterior abdominal wall. He also gave a note of a case of Hæmorrhagic Pancreatitis which he had had under his care in the Royal Infirmary. Microscopic specimens of this case and of a corresponding one which had occurred in Dr. James's clinic were shown and described by Dr. LEITH.

Dr. LEITH also showed specimens of a case of Phlegmonous Gastritis.

These afternoon meetings of the society are largely experimental, and the attendance of members at this meeting was not encouraging to those who have been advocating afternoon instead of evening meetings.

Reviews and Notices of Books.

The National Leprosy Fund Prize Essays on Subjects connected with Leprosy. No. 2. Conditions under which Leprosy has Declined in Iceland, by EDWARD H. EHLERS, M.D. No. 3. Leprosy in South Africa, by S. P. IMPEY, M.D., M.C. No. 4. On Spontaneous Recovery from Leprosy, by S. P. IMPEY, M.D., M.C. London: Macmillan and Co. 1895. Pp. 79, with Map. Price 3*s.* 6*d.*

THE title of the first of these papers (Essay No. 2), is oddly contradicted by the general conclusions of the author that owing to various circumstances leprosy is just now on the increase in Iceland. In 1848 the Government, looking upon the disease as about to disappear, closed the small-pox hospitals, which seem to have been veritable pest-houses. This false security led to carelessness, and during later years improved means of communication have introduced leprosy into parts of the island where previously none had existed. The value of official statistics in Iceland may be gauged from the fact that the "official enumeration" in 1889 reported 47 patients, whilst Dr. Ehlers in 1894 and 1895 himself saw 159, and, reckoning others whom he heard of but did not see, puts the number down at probably 200. Making every allowance for some increase in the five years the discrepancy is remarkable.

The main causes of decrease in the amount of leprosy after 1651, when the hospitals were established, are to be found, according to Dr. Ehlers, not in the hospitals, which never contained more than 5 per cent. of the whole number of lepers in the island, and certainly not in sanitation. The description of the ordinary living-room of the Icelander prevents any misconception as to the latter point: "If you enter the badstofa (general living-room—literally, bath-room) when thirteen or fourteen persons are sleeping there, first of all you feel a temperature which certainly both summer and winter reminds you of the tepidarium of a Roman bath, but surely here the likeness ceases. A suffocating stench and an unwholesome smell meet you. It is the smell of the mouldy hay, of the sheepskin quilts that are never dried or aired; it is the smell of the dirt which is dragged into the house on the clumsy Icelandic skin shoes. ..... In this dirt a confused mixture of cats, dogs, and children lie reeking on the floor, exchanging caresses and echinococci; it is the smell of the wet stockings and the woollen shirts which hang to dry next to a slice of dried halibut. ..... And if you poke your nose into the corners of the badstofa you will find a bucket in which the urine of the whole party is gathered; it is considered good for wool-washing." Increase of civilisation has not done much for hygiene here. The fear the natives have of contagion, and the great epidemics, of small-pox in 1707 and of measles in 1846, which

fell very heavily apparently on the lepers, were the main causes of the decrease of their numbers. Since then the numbers have increased again. The importance of contagion and the comparative non-importance of heredity is well brought out in Dr. Ehlers' series of cases. The island seems a small paradise for the epidemiologist. Family histories are known for many generations even among the very poor. "There may be a dozen persons who have left, for a shorter or longer period, the district where they were born; but the greater part of the Icelanders are born, live, and die in the same parish, a circumstance which is peculiarly favourable for epidemiological researches." He goes on to say, with a mixture of *naïveté* and daring which is refreshing in a prize essay, "The etiology of leprosy would be quite clear were it not for this *confounded* period of incubation, the duration of which is utterly unknown." In a short thirty-nine pages the author adds considerably to our information.

The second of the papers under review (Essay No. 3, by Dr. Impey) may be summed up as follows: 1. Leprosy has been known in the Cape Colony since the middle of the last century. 2. The disease has made rapid progress from the beginning of this century, but more especially during the last fifty years. 3. The Hottentots, of whom the Griquas are an offshoot, were, on account of their nomadic nature, the cause of the spread of the disease among the Bantu races. 4. The disease is much more prevalent in South Africa than is generally known.

The third paper (Essay No. 4, also by Dr. Impey), "On Spontaneous Recovery from Leprosy," is of exceeding interest. The author is at some pains to justify the use of the word "cured" in cases where leprosy previously active ceases to show any manifestations at all, the patient remaining of course maimed, but free from fresh leprous symptoms till death, which occurs from some other intercurrent disease. Cure in the wider sense of restoration to the *status quo ante* is impossible, not only in leprosy, but in many of the diseases with which we have to deal. Spontaneous recovery from leprosy in the sense of complete arrest till death is sufficiently worthy of attention. Such spontaneous recovery takes place only in cases of anæsthetic leprosy, never in tuberculous or mixed or syphilitic forms. Dr. Impey by many figures sets down the average duration of the anæsthetic form at about six years; "it may end fatally or otherwise in about six years, or it may continue a little longer, but so far as my experience goes in the anæsthetic form of the leprosy the maximum duration of the disease is about eleven years from the time that the first symptoms appear, or, including the incubatory period, about thirteen years. With few exceptions all the cases which exceed this period are no longer lepers." He tabulates 101 such "cured" patients in the Robben Island Hospital who had had the disease more than eleven years. They are all maimed. Seventy-two are entirely free from active symptoms or ulceration; in one alone there is still true leprous ulcerative process going on; in twenty-eight there is perforating ulcer of one or both feet. For reasons which are carefully discussed Dr. Impey is inclined to draw a clear distinction between the perforating ulcer of the foot and true leprous ulceration. Leaving out, however, the cases of perforating ulcer 7 per cent. of the anæsthetic cases became "cured"; including the cases of perforating ulcer the number is, of course, larger. That the word "cured" is justly applied is shown by the fact that the bacillus has disappeared, that wounds of the anæsthetic parts heal in the ordinary manner and do not become leprous, and that none of the self-cured cases die of or from the results of leprosy. The point is, of course, a most important one, as if the patient is in reality cured at the end of eleven or twelve years, it is as unjust to keep him segregated as it would be to keep an ex-small-pox patient at the hospital ships after his recovery. Further investigation is needed, but the value of the last of these essays cannot be exaggerated.

Medical Diagnosis: with Special Reference to Practical Medicine. By J. M. DA COSTA, M.D., LL.D. Eighth edition. London: Smith, Elder, and Co. 1896. Price 24*s*.

PERHAPS the most interesting fact connected with this well-known work is the date appended to the "Extract from the Preface to the First Edition," which is appropriately reproduced in this the eighth edition. It carries us back to 1864, when the book must have almost stood alone in a field which has since then become crowded with works of a similar class. But Da Costa's "Diagnosis," if the forerunner, is still amongst the foremost, and it says much for its genuine merit that it should have maintained this enviable position during a period full of fresh additions to the methods of diagnosis and new facts in our knowledge of disease. It is thus manifest that it must have undergone careful and extended revision with every succeeding edition, so that if it has grown in bulk it has retained the favour of the clinical observer who from the first recognised the value of its teaching and the practically useful knowledge that it imparts. No doubt much of the estimation in which Dr. Da Costa's work is held has been owing to the highly instructive method in which he deals with the subject. He does not—as many such text-books do—merely deal with the signs and symptoms of diseases in groups, but takes each system of diseases in turn, and dwells upon the points of differential diagnosis between affections that have one or more features in common. The utility of this method must be apparent to all, and it is this which makes the book one of extreme value to those who are engaged in actual practice. Take, for example, the chapter on Diseases of the Intestines and Peritoneum. Opening with practical instructions upon the character and import of alvine discharges, it next deals with Diseases attended with Paroxysms of Pain referred chiefly to the Middle or Lower part of the Abdomen, and not associated with marked Tenderness or with Fever; here we find the different forms of "colic" described, and then the differential characters of no less than ten other conditions characterised by this one symptom. In the next place are described Diseases attended with Pain and Marked Tenderness in the Umbilical Region or diffused over the Abdomen, as acute enteritis, acute peritonitis, and the affections liable to be confounded with the latter. The next section deals with Diseases attended with Pain and Tenderness in the Right Iliac Fossa, typified by appendicitis, and here again numerous conditions that simulate it are detailed. The remaining sections of this chapter treat of Disorders attended with Constipation, and of which it is a Prominent Symptom, Disorders in which Morbid Discharges from the Bowels Occur, and Diseases attended with Vomiting and Purging. We have selected this chapter at random merely to indicate the plan upon which the book is drawn up. A similar plan obtains in each department of the subject, and it is superfluous to add that the actual matter is thoroughly sound and enlightened.

Many years ago we remember an accomplished physician (since deceased) expressing the opinion that Dr. Da Costa's "Medical Diagnosis" was unrivalled both in its scope and in the sound practical instruction that it conveys. That it may long continue to earn such praise and that its distinguished author may have to supervise many another edition must be the hope of all who value good and useful medical literature.

Illustrations of Pathological Anatomy, with Descriptive Text. By Professor A. KAST and Dr. T. RUMPEL. English edition, revised and edited by M. ARMAND RUFFER, M.D. Oxon. Parts IX. to XII. London: Baillière, Tindall, and Cox. Price, twelve parts, 48*s.*; single parts, 5*s.*; single plates, 1*s.* 6*d.* each.

THESE instalments of a series of faithfully executed coloured drawings contain many plates which should be welcome to the teacher of morbid anatomy. The fact that they can be obtained singly is also of advantage, since it is thus possible for a selection to be made of those drawings that are most typical and representative. At the same time no doubt few will be content with isolated samples, but will prefer to possess the complete series, which embraces all the chief morbid conditions met with in the post-mortem room. The drawings have in every instance been made from recent specimens, and they have been very well reproduced in the chromo-lithographs. Amongst those given in the present parts attention may be drawn to the two specimens of "struma suprarenalis"—one from a case of pneumonia and the other from one of tuberculosis in which no symptoms of Addison's disease occurred. The former specimen represents granular swelling of the cortex, with fatty degeneration and hæmorrhage; the latter shows a caseous mass entirely replacing the capsule. There is an excellent drawing of "acute suppurative meningitis," and another of "tuberculous meningitis." In Part XI. the liver from a case of phosphorus poisoning may be contrasted with two specimens of acute yellow atrophy, one of the latter showing somewhat unusual characters. Part XII. contains three excellent representations of malignant disease of the stomach, together with a fourth plate showing the varicosity of œsophageal veins in hepatic cirrhosis. The accompanying text is somewhat meagre and is, moreover, not very carefully translated.

We have received from Mr. Henry Sell of Fleet-street a copy of the sixteenth annual issue of *Sell's World's Press*, a most useful and indispensable publication to all associated with the press; also a copy of *Sell's Directory of Registered Telegraphic Addresses*, giving a list of some 50,000 firms having such abbreviated addresses, together with their telephone numbers. The two volumes are a credit to the enterprise of Mr. Sell.

Analytical Records
FROM
THE LANCET LABORATORY.

(1) CONCENTRATED PEPTONISED MILK; (2) PEPTONISED COCOA AND MILK; (3) PEPTONISED MILK AND COFFEE.

(SAVORY AND MOORE, 143, NEW BOND-STREET, W.)

THE recent addition of peptonised milk and coffee (café zylak) to the excellent list of peptonised preparations which have long been associated with the names of Messrs. Savory and Moore affords a fitting and valuable completion of the group. A spoonful of café zylak stirred into hot water affords at once a nutritious and pleasant beverage possessing the estimable qualities of aroma and flavour of well-made and freshly-prepared coffee; nor are these its only satisfactory features, since it contains also a distinct amount of the restoring and stimulating principles represented chiefly in the alkaloid caffeine. We easily succeeded in obtaining crystals of the substance on extraction with chloroform previously to the removal of the other bodies by well-known means. We could trace no preservatives except sugar, which renders the preparation sweet—perhaps too sweet to some tastes. That the preparation is rapidly available as a nutrient is probable from the fact that separation of peptones was effected by the addition of alcohol and subsequent purification, so that the reactions of pure peptone were obtained. It exhibits, therefore, the composition of a powerful food, which needs little effort on the part of the digestive functions to be utilised. The preparations of peptonised milk and of milk with cocoa have been improved. In these also we recognised peptones, and the entire absence of all bitter taste gives evidence of the care with which the peptonising process is conducted. The proteids do not curdle on the addition of acids. It is satisfactory to add that the fat of the milk has not been eliminated, for we found nearly 12 per cent. in the pure milk preparation. These results are excellent and give evidence of the indisputable worth of these special foods.

(1) EMBLIC FRUIT AND CONFECTION; (2) ERYTHROL NITRATE CHOCOLATE TABLETS.

(WILLIAM MARTINDALE, 10, NEW CAVENDISH-STREET, W.)

The fruit of phyllanthus emblica is suggested as an agreeable laxative. We have received some preserved specimens which have the appearance of small greengages. The fruit is pulpy and the juice, which is acidulous, is said to exert a cooling refrigerant besides a laxative effect. It is used in India also to promote appetite and as an aid after meals in atonic dyspepsia. The preparation affords a convenient and pleasant means of administering a mild purgative to children, either in the form of whole fruit or as a paste or confection. Erythrol tetra-nitrate is, according to Professor Bradbury,[1] a most valuable and safe vaso-dilator. It appears to be soluble in fats, notably the fat of chocolate, which serves therefore as an excellent vehicle for its administration. Erythrol nitrate is recommended particularly in reducing high arterial tension and as affording a safe and effective means of diminishing blood pressure.

CHINOSOL.

(B. KÜHN, 36, ST. MARY-AT-HILL, E.C.)

In view of the many advantages which it presents chinosol promises to become of special service as an antiseptic, disinfectant, and deodorant. It is, for example, not caustic or corrosive, is readily and quickly diffusible, does not coagulate albumin, and yet is not poisonous. A solution of 1 in 40,000 is sufficient, it is said, to check the development of the pus organism (staphylococcus pyogenes aureus), while carbolic acid of 1 per 1000 strength is uncertain. It is a fine powder of bright yellow colour, soluble in cold water, and possesses only a slight aromatic odour. With small provocation, as with the slight alkaline fluids of the body, oxychinoline is set free, and it is this substance probably which renders chinosol prompt and powerful as an antiseptic. Chinosol may be had in powder, tablets, and may also be applied on gauze or absorbent cloth. It is well spoken of in gynæcological and dermatological practice.

ADEPS LANÆ (N. W. K.), HYDROUS AND ANHYDROUS.

(T. CHRISTY AND CO., 25, LIME-STREET, E.C.)

Adeps lanæ (N. W. K.) possesses a distinctly lower melting point than that mentioned for wool fat in the Pharmacopœia. It is accordingly more supple and soft, and may be manipulated without the addition of water if required. It absorbs water, however, to a very large extent, as our experiments have shown. We found the melting point to lie between 96° and 97° F., whereas the Pharmacopœia states that the melting point of wool fat should be between 100° and 112°. Adeps lanæ is of admirable purity and particularly well adapted for the purposes of an unguent, being readily absorbed, while it is not prone to rancidity.

PERIO, A SOAP SUBSTITUTE.

(THE PERIO COMPANY, STATION-APPROACH, LEWISHAM, S.E.)

Perio is not a soap, but withal an excellent detergent.

[1] See Bradshaw Lecture, THE LANCET, Nov. 16th, 1895.

It cleanses beneficially and harmlessly and imparts softness of feeling to the skin. With water it forms a kind of paste which appears to dissolve, and in rubbing the hands with the resulting liquid dirt is certainly removed and an agreeable clean sensation is experienced. Under the microscope starch cells could be seen in abundance, and on adding hydrochloric acid the powder effervesced, but no fat separated. On incineration it yielded an ash in tolerable quantity, which contained carbonates, chiefly in combination, as the spectroscope showed, with potassium. Perio is agreeably scented and affords an excellent substitute for soap, especially where very sensitive skins are concerned.

(1) EXTRACTUM SANTALI SOLUBILE (BELL); (2) AROMATIC SOLUTION OF TAR.

(JOHN BELL AND CO., 225, OXFORD-STREET, W.)

Liquid extract of sandal wood has been prepared with the view of obviating the unpleasant eructations and gastro-intestinal irritation commonly produced by sandalwood oil, but characteristic of most oleo resins, although in this respect oleum santali, as is well known, is more easily taken than copaiba. The liquid extract (Bell) possesses the usual characters of the oil and is a dark-brown spirituous solution which mixes well with water and other liquids. It should be useful in inflammatory affections of the bladder and urethra, especially in gonorrhœa; while now that the oleo resins have been excluded it should be available in diminishing and disinfecting the profuse and fetid expectoration often met with in chronic bronchitis. The liquor picis aromaticus is rightly described as aromatic, though the tar constituents, among which are guaiacol and creasol, are still very evident to the taste. It is a decided improvement on ordinary pix liquida and used as a remote disinfectant and deodorant in fetid discharges from the bronchi and lungs is doubtless more effective. It may also be employed for purposes of inhalation.

LLANGAMMARCH SODA-WATER AND AERATED BARIUM WATER.

(THE LLANGAMMARCH WELLS MINERAL WATER CO., LLANGAMMARCH WELLS, CENTRAL WALES.)

Llangammarch in Central Wales is most favourably situated for the manufacture of pure aerated waters. There is an abundant supply of pure spring water which comes from an absolutely uncontaminated source high up on the hills. It contains only 6 grains of dissolved solid matter per gallon, which consists entirely of mineral salts. The water is soft, brilliantly clear, and fresh to the palate. It is free from organic matter and bacterial impurity. On analysis we found the soda-water to be equally satisfactory in regard to purity. It yielded absolutely no free ammonia and only traces of albuminoid ammonia, no nitrogen in the form of nitrate, and only 0·77 gr. per gallon of chlorine in chlorides. Its antacid properties are equivalent, we found, to 3½ gr. of bicarbonate of soda per pint. We are glad to find that the makers recognise the necessity of providing against metallic contamination by adopting syphons with porcelain-lined delivery tubes. Particularly is this a necessary precaution when the water, as in the present case, is of exceptional purity. Further evidence of the company's endeavours to keep their aerated beverages free from impurity is furnished by the fact that the aerated barium water is also bottled in porcelain-lined syphons. This interesting water was the subject of analysis and report in THE LANCET of Nov. 24th, 1894. It is clean to the palate and pleasantly sparkling. The quantity of barium is remarkably constant, a fact which makes the drinking of it for medicinal purposes quite safe. Thus in 1883 Dr. Dupré found 6·26 gr. of barium chloride per gallon; in 1894 we found 6·4 gr. per gallon; and the present aerated sample was found to contain exactly 6 gr. per gallon. The quantity of barium chloride therefore has not varied more than a fifth of a grain per gallon during twelve years. The water has lately been used with favourable results as a cardiac tonic, the barium exerting an effect like digitalis in slackening and reducing the heart-beat and augmenting the amplitude of the pulse, without, however, undue increase of the internal pressure. The pump-house and baths at Llangammarch have, we learn, recently been remodelled for the better accommodation of patients who desire to go through a course of treatment with barium internally and externally, and these have been now supplemented at the hotel by the addition of facilities for applying the method employed by Dr. Schott at Nauheim for the relief of gout, rheumatism, and affections of the heart.

New Inventions.

THE PHONENDOSCOPE.

IN THE LANCET of Nov. 25th, 1882, there appeared an interesting account by Dr. Wilks of the "Evolution of the Stethoscope" from the historic roll of a few sheets of note-paper which gave Laennec the idea of mediate auscultation to the most highly finished "binaural" of to-day. Another step in this interesting application of acoustics to the service of clinical medicine has been made in the instrument before us, to which the somewhat fanciful name of "phonendoscope" has been given. It is the invention of Professor Eugenio Bazzi and Professor Aurelio Bianchi, and, as is the case with most new inventions, the claims advanced in support of its superiority over the stethoscope are, to say the least, somewhat startling. In the descriptive circular which accompanies the apparatus we are told that "the phonendoscope is useful for hearing: 1. The sound of the respiratory organs, of the circulation of the blood, and of the digestive organs in the healthy body as well as in the sick subject. 2. The sounds made by the muscles, joints, and bones. 3 The sounds in the matrix at the time of pregnancy and the noise provoked by the fœtus. 4. The sound of the capillary circulation. 5. The slightest sound produced in any diseased condition of the body; hence it is possible to draw on the body the dimensions, the position or any alteration in the position of the various organs and of the fluids which have gathered in the most important cavities of the body. 6. The sounds in the ear, the eye, the bladder, the stomach, and the intestines." We can only say that if all this be true, then the instrument is indeed an acquisition, and its employment will necessitate the expansion of treatises on auscultation to new fields of research. Perhaps to ascertain all the sounds above enumerated requires prolonged and special training in the use of the phonendoscope, but all that we have been able to do in a comparatively brief acquaintance with the instrument is to carefully test its conducting powers in comparison with those of the ordinary stethoscope. This trial has resulted in a verdict in favour of the new invention as a superior conducting medium of the sounds of the heart and lungs, normal and abnormal; although even this statement must be guarded by the admission that if the observer is not careful he is liable to get confused by adventitious sounds created by the instrument itself. Its best service will probably be found in the detection of faint murmurs and in the readiness with which the heart sounds can be heard through several layers of clothing.

Two-fifths of natural size.

The instrument consists of a circular flat metal box or tympanum (C) having on its one surface two apertures for the attachment of the rubber ear-tubes, whilst the other surface is formed by a thin disc which is readily thrown into vibration. The best results are obtained by simply applying this disc to the surface to be examined. By an ingenious contrivance a second disc (B) can be superposed upon this one and a vulcanite rod (A) attached to the

former, so that the area of auscultation may be extremely circumscribed. The conduction of the sounds is only slightly diminished by the use of this rod, which thus combines the principle of the solid stethoscope with that of the tympanum. The rod furnished with the instrument is about two inches in length, but it is stated that there are other rods of various lengths to enable the "phonendoscopist" to receive sound-vibrations from the natural cavities which communicate with the exterior of the body. Altogether we consider the instrument highly ingenious, carefully and compactly constructed, useful as an aid to auscultation, but yet not likely to entirely supersede the use of the stethoscope. It may also be found useful in class demonstration, since it would be easy by means of branched tubes to enable several persons to listen at the same time. The agents for the phonendoscope in this country are Messrs. Brady and Martin of Newcastle-on-Tyne.

THE "VARILAT" LATTICE ELASTIC STOCKING AND LEGGING.

THE "Varilat" Lattice Elastic Stocking and Legging is made all in one piece, without any woven or interlaced arrangement, the material being red indiarubber formed into a fine and soft sheet. Triangular holes three-quarters of an inch on each of their sides are cut in the rubber sheet, leaving interspaces about half an inch wide which give the necessary support to the limb, while the holes permit free access of air to the skin and escape of moisture. The "Varilat" articles are durable and comfortable to wear and impart a very equable pressure; there is also a probability that they tend to protect the indurated and thickened portions of the varicose veins. They are very cleanly in use, as they may be washed freely without injury. The "Varilat" principle has, it is stated, stood the test of seven years' practical use, and anklets, knee-caps, thigh-pieces, leggings, and stockings are made in this material. The manufacturers are the "Varilat" Lattice Elastic Stocking Company, 70, Fenchurch-street, E.C.

ARMY MEDICAL REPORT FOR 1894.

(SECOND NOTICE.[1])

THE average strength of the troops serving in the United Kingdom during 1894 was 99,360, with an additional 2,431 as the computed average number of men detached from their corps. The following table gives the most important of the statistics of sickness and mortality among the troops quartered in the three great divisions of the kingdom.

1894.	Ratios per 1000 of strength.					Average sick time to each soldier.	Average duration of each case of sickness.
	Average strength.	Admissions.	Deaths.*	Invalidling.*	Constantly sick.		
						Days.	Days.
England and Wales	71,355	680·3	3·48	18·22	42·96	15·68	23·05
Scotland	3550	586·8	6·15	18·17	29·59	10·80	18·41
Ireland	24,455	594·6	3·99	13·57	36·56	13·34	22·44
United Kingdom	99,360	655·9	3·70	17·06	40·91	14·93	22·77

* Calculated on strength, including men detached (England and Wales, 1349; Scotland, 27; Ireland, 1105), 2481 in number.

These ratios compare favourably with those of the previous year. There were 11 cases of small-pox in 1894 as compared with 8 in the previous year and 6 as the average number for the preceding eight years; 5 out of the 11 cases occurred at Maidstone, where the disease appears to have been introduced by a militiaman coming up for training. Scarlet fever caused 233 admissions and 3 deaths, being considerably less than the corresponding figures for 1893. The admissions for enteric fever in 1894 numbered 124, with 21 deaths, giving ratios per 1000 which, as regards admission-rate, correspond with the average rate of the preceding ten years, and as regards mortality a rate somewhat below that of the decennial average. Not one of the administrative districts was free from this disease, which appeared in thirty-six stations altogether. The greatest prevalence of this fever was in Dublin, where a great improvement is nevertheless shown in 1894 as compared with previous years. A serious attack of this disease occurred at Caterham—21 cases and 2 deaths. "The water-supply, which was derived from the neighbouring Metropolitan Asylum well, was discovered to be contaminated with sewage; the use of this water was at once discontinued and a supply obtained from the East Surrey Waterworks, when the admissions ceased. An outbreak also occurred amongst the inmates of the asylum, which confirms the opinion that this was the source of the disease."

As regards venereal diseases the admission-rate for primary syphilis gave a ratio equal to 47·7 per 1000, which is lower than the corresponding rate of the previous year by 9·2 and below the average of the preceding eight years by 30·2. The admissions for secondary syphilis in the United Kingdom were 3446 and there were 6 deaths.

There were 23 cases of suicide amongst the troops serving at home in 1894, as compared with 24 in the preceding year and an average of 21 for the previous ten years. The average age of the men was twenty-eight and their average service eight years. The loss in the German army—that of the North especially—from suicide is, we believe, much higher than that of our own army.

At page 18 of the report will be found a table showing the statistics of sickness and mortality among troops quartered in large camps as compared with those of troops quartered in forty large towns. The figures give somewhat more favourable results, as might be anticipated, in the case of the former—those quartered in camps. As compared with the preceding year there is a decrease in the admission-, death-, and constantly-sick rates in the case of troops in both camps and towns. Another table gives the health statistics of different arms of the Service for 1894 and for the previous ten years. The highest admission-rate in any arm of the Service in 1894 was in the Infantry and Foot-guards; the highest mortality-rate was in the Regimental depôts and in the Royal Artillery, the lowest in the Cavalry; invaliding was highest in the Footguards and lowest in the Royal Engineers; constant inefficiency from sickness was also highest in the Footguards and lowest in the Royal Engineers and Regimental depôts.

As regards recruiting, we may say that the number of recruits inspected in 1894 was 61,985; of these 25.074 were found to be unfit, equal to a ratio of 404·51 per 1000. The remaining 36,911, or 595·49 per 1000, were found fit for the Service. By far the greatest number of recruits were between eighteen and nineteen years of age.

Among the remarks as to the sanitary conditions of the home stations we notice that at Netley it is reported that ten cases of erysipelas occurred among the foreign invalids in that hospital during the year, and were attributed among other causes to bad and defective flooring. On a recommendation of the Army Sanitary Committee the floor of the surgical division was relaid and the latrines were reconstructed on an improved system. In the Aldershot Division Surgeon-Major-General Paterson, while reporting that the year had been a healthy one and that there were no special causes at work in the production of disease, calls attention to the very inadequate amount of hospital accommodation provided for the requiremeuts of the camp, to the need for new and additional hospital provision for infectious diseases, and for the provision also of a hospital for the soldiers' families. He likewise alludes to the present sewage farm as a menace to the health of the camp. The construction of new barrack buildings and their accessories and works for improving the sewerage and drainage of the camp have been actively progressing of late years with a corresponding result in a reduction of the amount of preventable disease.

This finishes our brief analysis of the more salient points of the report as far as the troops quartered in the United Kingdom are concerned, and it only now remains to consider those sections which deal with foreign stations and the papers contained in the appendix to the report under review.

[1] The First Notice was published in THE LANCET of Feb. 22nd, 1896.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 29, 1896.

THE glycogenic function of the liver has, almost from the date of its enunciation by CLAUDE BERNARD, found a consistent opponent in Dr. PAVY, who has worked with unremitting devotion to prove that this view is physiologically unsound. The subject is one of more than academic interest, for it lies at the foundation of the pathology of diabetes, besides being perhaps the most important of the questions concerning animal nutrition. In his recent work on the "Physiology of the Carbohydrates."[1] Dr. PAVY has formulated a distinct alternative to the generally accepted doctrine, and has declared that in consequence of the facts of his observation and experience "the views which have prevailed since the promulgation of the doctrine giving to the liver a glycogenic function must be absolutely abandoned. The edifice has been constructed upon a false foundation, and nothing short of its complete demolition will suffice to meet the requirements of physiological truth." So bold and uncompromising an attack upon the citadel of orthodox physiology was bound to be challenged, and no better champion could be found than Dr. NOËL PATON, who quite recently, working at the subject of hepatic glycogenesis, had declared: "The theory of PAVY, repeated in nearly every text-book, that the liver is a sugar-destroying and not a sugar-forming organ, rests on so unsubstantial a basis and has been so completely refuted by the work of SEEGEN and other investigators that it need not be considered." It will be seen at once how totally irreconcilable must be the views held on this subject by these two writers, since each describes the other's doctrine in almost identical terms as being ill supported by facts. Dr. PATON'S criticism,[2] which called attention to the work of others that had apparently been ignored by Dr. PAVY, elicited from the latter a rejoinder which to the uninitiated must appear as out of all proportion to the article with which it deals. In this "Epicriticism"[3] Dr. PAVY minutely dissects Dr. PATON'S article, taking it almost line by line and treating it with hardly the dispassionate calmness generally expected of science. The publication of this "Epicriticism," however, affords the opportunity for a restatement of its author's views and their comparison with those they seek to replace. It is possible that had its tone been different the controversy would have been closed, but we can quite understand that Dr. PATON felt it incumbent on him to make a further reply,[4] and for aught we know the dispute may be prolonged to the Greek Kalends.

The glycogenic doctrine implies that during life there is a constant conversion of glycogen into sugar taking place in the liver, but that the process is so regulated that only a sufficient supply of sugar is furnished to the general circulation as is required by the needs of the body. Dr. PAVY denies that this does occur. He affirms that there is no proof that this conversion takes place during life, although immediately after death the liberation of a ferment operates in transforming the hepatic glycogen into sugar with increasing rapidity. According to him the hepatic blood contains a smaller amount of sugar than the portal blood, and, moreover, if this amount in the general circulation became at all increased it would soon appear in the urine. One of the long-standing points of difference between these two views rests upon the actual amount of sugar in the general circulation, and on this point the statements are irreconcilable; whilst the question is still further complicated by the well-known researches of LÉPINE, which suggested that the pancreas by its internal secretion of a glycolytic ferment prevents the accumulation of sugar in the blood, and therefore prevents the occurrence of glycosuria. It must not, however, be supposed that the glycogenic doctrine necessarily requires the assistance of this pancreatic ferment to account for the removal of excess of sugar from the circulation. It is averred that the sugar is utilised in various ways in the economy, part of it, perhaps, being again converted into glycogen in the muscles and organs. Dr. PAVY, in arriving at the conclusion that proteid matter contains a carbohydrate molecule which under certain conditions can be "cleaved off" from the former, points to another possible destination of glycogen than by its change into sugar. If, as he says, the proteid can be broken up to yield carbohydrate, so conversely under the influence of living protoplasm the proteid can be built up again by a process of synthesis with its carbohydrate constituent. Nor can we find that any serious objection is taken to his views on this point, which he has further strengthened by an appeal to the processes of vegetable physiology.

It is in regard to diabetes that the conflict of these two opposing views comes to be most prominent. On the glycogenic doctrine this disease is to be mainly ascribed to failure of the liver to arrest ingested carbohydrate or to the excessive and perverted performance of its glycogenic function. In either case an undue amount of sugar gains entrance into the general circulation and is excreted by the kidneys. At the same time it is admitted that some share may be taken in the production of the diabetic state by pancreatic derangement, and Dr. PATON refers to KAUFMANN'S experiments on glycosuria following puncture of the floor of the fourth ventricle as showing that this procedure may have the double effect of stimulating the formation of sugar in the liver and inhibiting the internal secretion of the pancreatic (glycolytic) ferment. In Dr. PAVY'S thesis the explanation of the occurrence of diabetes is simpler, since it does away with the active share taken by the liver in the formation of sugar. According to him the ingested carbohydrate, derived from the carbohydrates of food and from peptones, is in health partly converted into fat in the intestinal epithelium and partly into glycogen in the liver, and that the failure to so convert it will lead to the general circulation being overladen with sugar, which is at once eliminated by the kidneys. But he too recognises that in severe cases sugar finds its way into the circulation from the tissues themselves, being "cleaved off" from the proteid molecules in a manner analogous to what he believes to occur

[1] Churchill, 1894.
[2] Edinburgh Medical Journal, Dec., 1894.
[3] London: Churchill, 1895.
[4] Edinburgh Medical Journal, Feb., 1896.

in the process of proteid digestion. As regards pancreatic glycolysis, the position assumed by Dr. PAVY seems to us to be this. Rejecting the theory that any such glycolysis does take place in the blood—for if there were an excess of sugar which required to be so got rid of it would be made manifest in the urine—he leads us to infer that extirpation of the pancreas causes glycosuria by the withdrawal of its influence in digestion. We may have misunderstood his argument here, but at any rate this seems to be almost the only alternative to the ingenious hypothesis of LÉPINE, which Dr. PAVY declares not to be "in touch with the requirements of physiology." We do not think it would be profitable to enter into the minute details of methods and observations which are advanced on either side in support of their respective contentions. Dr. PATON is firmly convinced that the vital action of the hepatic cells is largely concerned in the metamorphosis of glycogen into sugar, which is carried away in the general circulation to be disposed of in various ways, many of which are, to say the least, still hypothetical. Dr. PAVY is just as certain that no such formation of sugar takes place in the liver under normal conditions, and further claims to have shown that the destiny of carbohydrate matter in the body is in part to be stored as glycogen, in part to be converted into fat, and yet again in part to enter into the formation of proteid material. It is possible to afford a reasonable explanation of diabetes on either doctrine; but for the physiologist the subject involves the determination of the actual processes that go on in the healthy living body, and to arrive at this end it is essential that observations and experiments should be thoroughly made and carefully scrutinised. In science the work of every investigator must be controlled by that of others, and until there is attained a general concordance of opinion it would be rash to accept either one view or the other as embracing the whole truth.

THE usurpation of functions other than clerical by ecclesiastics is exciting a great deal of indignation among the legitimate practitioners of medicine and surgery in France and on the Continent generally. The most notorious ecclesiastical medicaster in Europe at the present day is apparently the Abbé KNEIPP, whose establishments are said to be so numerous in Switzerland that for want of room he has been obliged to locate the more recently opened ones in France. It has been calculated, says a writer in a German paper, that police magistrates dispose of a prisoner per minute on the average; the Abbé KNEIPP does business at a far more rapid rate than that. His record at Worishofen, which has the honour of being his headquarters, is no less than two and a half patients per minute! Seated in a large and comfortable *fauteuil* at a table of portentous size and smoking a huge cigar the Abbé dictates his prescriptions to an assistant with the most solemn air imaginable, while the sick multitude, men, women, and children, pass in Indian file before him at a rapid pace. In an hour and a quarter he can thus easily dispose of 180 patients. He makes no pretence of examining them, and merely asks a question or two as a matter of form, for his treatment never varies. No matter what the complaint may be, whether an affection of the uterus or hæmorrhoids, a complication following on syphilis or an acute orchitis the result of gonorrhœa, the invariable formula is cold-water bathing and barefoot promenades in damp grass. Only in the case of eye affections does this ecclesiastical healer authorise a departure from his stereotyped method of treatment. When the ocular apparatus is at fault he directs the application of an ointment made from honey and (that refuge of the charlatan) "medicinal plants." A less notorious clerical medical practitioner is the *curé* of Sens, who rejoices in the name of CRUP. At the extensive sanatorium organised by this enterprising clergyman cases of coxalgia, Pott's diseases, paralysis, &c., no matter how severe or advanced, are taken in and cured, or said to be. In order to avoid the long arm of the law M. CRUP has contrived to attach a surgeon to his establishment.

Not long ago we mentioned the case of a *curé* who performed Cæsarean section on a woman before it was quite certain she was dead, and several other instances, well-nigh as flagrant, are related by some of our foreign contemporaries. *Apropos* of the penalty inflicted upon a certain Abbé COYON of Festigny, who was fined 200 francs for treating a great number of sick people with potions prepared by him whereof the exact composition could not be determined and which were designated white *tisane* or yellow *tisane*, a writer in the *Journal de Médecine de Paris*[1] makes the following comment: "It might be supposed that in face of these facts, which are of frequent recurrence because the delinquents are condemned to such paltry fines that it merely serves to augment their popularity, the ecclesiastical authorities would take steps to interdict the exercise of medicine to *curés* and Sisters of Mercy. Well, all I can say is that whoever thinks our bishops are going to put a stop to this profitable business is mightily mistaken." Writing to the same journal Dr. MERVEILLE draws attention to a paragraph in a lay paper of good repute which is evidently intended to be taken seriously. "*A Good Idea.*—One of our readers has made a suggestion to which we desire to draw special attention as it is worthy of the most serious consideration. Inasmuch as in most rural districts there is a sad lack of medical men it is indispensably necessary that our young seminarists should attend courses of medicine and pharmacy, so that when the time comes for them to be appointed *curés* they may be able to afford medical aid to the sick. The *curé* of Kerkom, a small parish of Brabant, M. de GREEF, who died lately, was a doctor after a fashion and kept up in his house a small pharmacy. In this way he was of incalculable benefit to his flock. His case might be multiplied in every direction if only the idea of our correspondent could be given effect to."

The offices of the priest and the medical man were at one time generally, and are even now among certain tribes, combined in one person. When an individual was taken ill he was supposed to be inhabited by a demon. The priest medicine-man was sent for, and, attired in a special costume calculated to impress the devil, the patient, and the patient's friends with an idea of his importance and powers, he howled, danced, rattled bones, thumped the mystic drum, and twirled the bull roarer, singing at intervals the appropriate

[1] Jan. 19th, 1896.

songs. This "bedside manner" was quite in accordance with the times in which he lived. Nowadays, though, antics of this sort are confined to irregular spiritual and medical practitioners. We are surprised to find, however, that the Roman Church should wish to combine the healing of souls with the healing of the body. That the one reacts on the other is a fact patent to all, but unless a priest is also a duly qualified medical man he should not be allowed to practise medicine. Of course we would except the case of missionaries in out-of-the-way countries, but in a land like Belgium or France the idea is absurd. Even in England we find that the "clergy and ministers of all denominations" do not always appreciate orthodox medicine at its full value, for advertisements of quack medicines are generally accompanied by a testimonial from a "minister." But if such things as we have mentioned are done in the green tree of the Church, what can be expected of those under the branches of the dry tree "extra ecclesiam"?

IF we are in any danger of forgetting the many-sidedness of the profession the lay press may be trusted to remind us of it. The *Quarterly Review*, for example, has lately touched on the various requisites that should be met with in the medical man if he would emulate the distinction, social, literary, and political, as well as scientific and professional, achieved by the great consultants of the past, and holds up to us the career of Sir HENRY HALFORD as combining the merits which conciliate acceptance with the lay world while in no wise detracting from special claims to the confidence of experts. Sir HENRY HALFORD was not only a physician who "succeeded in getting his patients well," and was appreciated in professional consultation accordingly; but he had the versatile culture, the winning address, and the power of interesting himself in current topics that qualify for social popularity and earn favour in high places. In the course of a brilliant review of Dr. MUNK'S recent life of Sir HENRY HALFORD the *Quarterly* supplements from personal knowledge the qualities omitted by the biographer as contributing to their common hero's success, and dwells at considerable length on the literary, especially the classical, attainments which constitute him the true "ultimus Romanorum" as well as the "Chesterfield of physicians." Without, perhaps, intending it, the Reviewer opens up the *vexata quæstio* of what medical education should be, and obviously inclines to a resuscitation of the studies almost wholly abandoned by the medical student in favour of others more "practical" and more modern.

"A great physician," in the Reviewer's eyes, "is a great artist"—one who can read the expression of disease and estimate its character in patients in whom the "mere man of the laboratory," as he calls him, can see nothing. In Sir HENRY HALFORD'S case, as in that of many another fortunate practitioner, such as SYDENHAM, it may be questionable whether the training in physics or in nature-study, now so universally demanded from the medical student, would have added to his undoubted success in treatment. To such a man the experience of the bedside and the sick-room was all in all, while the humanistic studies in vogue at the universities supplied the intellectual breadth, refinement, and catholicity which temper the narrowness apt to spring from professional concentration. A mental balance was thus attained from which the special faculties applied to medicine could not but benefit, and the Reviewer certainly makes out a strong case for such training as it was exemplified in Sir HENRY HALFORD. But, after all, the distinctive note in Sir HENRY HALFORD'S combination of gifts was the *mens medica*, without which the great Dublin physician, Dr. WILLIAM STOKES, maintained that no student, however diligent, could ever rise above mediocrity. *Medicus nascitur non fit*, and the profession, like its sisters divinity and law, is full of failures illustrative of the axiom. At the same time, it has its various degrees of usefulness in which the mediocre practitioner has his place as well as the "great artist" of the Reviewer's admiration; and we think it will be conceded that in the former case the scheme of study should be so adjusted as to give the student the best chance of making the most of his powers. This is all the most strenuous advocate of the "modern side" in public schools would contend for. Professor HUXLEY when he denounced the "Latin fetich" was animated by no unenlightened depreciation of the classics. He himself, indeed, was at no small pains late in life to make good the defects of his early training in Greek and Roman literature.

There is one consideration, however, which may bring comfort to the enthusiast for classical training, while in no way detracting from the claims of physics or nature-study. Thanks to improved text-books and improved methods, a good working knowledge of Latin, and even of Greek, can be acquired nowadays in half the time which was necessary in Sir HENRY HALFORD'S day. Indeed, the *Quarterly* Reviewer indicates inaccuracies in Sir HENRY HALFORD'S Latinity which any sixth form boy at Westminster or Eton would avoid. The economy of time and trouble now secured to the young scholar can be utilised in the interests of science, which has itself profited similarly by improved manuals and methods of acquisition. Teachers of authority foresee the day when both departments of school training—the humanistic and the scientific—will come to complement, not to exclude, each other—a result which will be felt for good in every profession, conducing to larger intellectual sympathies in each and the provision of a common meeting ground for all. The theological and the legal professions cannot fail to benefit by the due recognition of science in their mental equipment; while as to the medical, the culture to be derived from an early initiation in the higher literature would (as the *Quarterly* reminds us) be simply a wholesome revival of an honourable tradition—the resuscitation of an advantage enjoyed by the HEBERDENS, the HALFORDS, the LATHAMS, and the WATSONS of a past generation, and still represented by the BACCELLIS and VIRCHOWS, the HUMPHRYS and RUSSELL REYNOLDS of our own.

KING'S COLLEGE HOSPITAL.—The annual meeting was held on Feb. 26th, the principal business being the adoption of the report, which showed an increase of 249 in-patients over the previous year and an increase in out-patients of 4137.

Annotations.

"Ne quid nimis."

THE ROLL OF THE PROFESSION.

THE Roll of the Profession for 1896 is before us. We may at the outset congratulate the Registrar on the early appearance of the Medical Register — somewhere about Feb. 17th. We had a similar congratulation to offer last year, and on this occasion it appears even earlier. We are not without hope of seeing the Register appear early in January, and know no very clear reason why it should not do so. Considering the despatch which is shown by the officials of, and printers to, the Council during its actual sittings it is difficult to understand why a mere register should not be in a state of preparedness for publication during the first few days of the year. The time that elapses can make no difference in the actual facts, and should make very little in the collection of them, provided The Medical Register for 1896 contains the striking and unprecedented number of 33,601 medical men. If all these gentlemen practised in the United Kingdom with its population, say, 39,134,166, it would give to each practitioner a *clientèle* of 1164 or thereabouts. Fortunately ours is a widely spread and fairly populous empire, and the gentlemen whose names are on the Register practise in all parts of it—the colonies and India and in our naval and military services—to say nothing of foreign countries, in which they are by no means unrepresented. As a matter of fact, something over 6000 of the registered practitioners, or over one-fifth part, find their residence or their occupation in fields outside the United Kingdom. But even so, the numbers are somewhat appalling and they show no appreciable sign of any falling off. After subtracting the 6209 as practising beyond the United Kingdom, there remain 27,392 at home with a *clientèle* of 1428 persons. If we take the numbers on the Register for the last ten years it will be seen that they exceed those of the preceding years respectively by 454, 794, 693, 409, 815, 392, 1035, 1054, 993, and 964. These figures show that the average yearly increase in the number accruing to the Register during the first five of these years was 633, that for the last five years being 887. It is true that in the last year there was a slight falling off in the rate of increase, and that in the two last years there was less addition than in the preceding two. But when all allowances are made there is no ground for hoping that in any early years the great overcrowding of the profession will be remedied. This is made all the clearer when we pay attention to the new registrations rather than to the mere numbers on the Register. These are sometimes depleted by a somewhat wholesale, though only temporary, removal from the Register under Section 14 of the Medical Act, empowering the Registrar to remove from the Register the names of gentlemen who do not respond to his inquiries as to their present address. This is the explanation of an apparently small addition (392) to the Register in 1891, though there were actually 1345 new registrations. Last year 1446 was the number of new registrations, of which 731 were in England, 565 in Scotland, and 150 in Ireland. This exceeds the number in 1894 by 20, but it falls short of the average of five years by 16. The number of deaths in the profession is, happily, greatly less than that of the new additions. Last year it was according to the Register, 538. Strange to say it seems to be a diminishing number, for whereas in the last twenty years 561 died annually on an average, in the last five years the average has been only 536. It must, however, be understood that these figures are not accurate. It is scarcely conceivable that they should be so when the diffusion of the profession over the empire is considered. The Registrar to the General Medical Council uses diligence to get accurate information; the registrars of deaths have an inducement to supply it. But it would appear that success has not yet fully been attained, for the obituary published in the current Medical Directory gives a larger number of deaths. The Register also does not always contain the full description of a practitioner's titles or an accurate statement of address—even in the case of some who would be thought likely to forward such information to the Registrar. This is, of course, the fault of gentlemen themselves, whose description is thus inaccurate, but we are disposed to think that there is room for some innovation in the method of getting information. The Medical Register is the law and the testimony to which all must appeal in courts and in legal processes, and it is important that it should have the very last touches of accuracy, and that in this respect it should have no rival. It is satisfactory to notice that only one person was removed from the Register under the penal clauses in the year 1895. The penal powers of the Council are used sparingly—some think too sparingly. But it is, after all, no mean testimony to the honour and credit of a profession, much tried and often badly used, that only one out of its 33,601 has been removed from the Register under the penal clauses. We must leave this indispensable volume, with its stores of information in the shape of tables and copies of all the Medical Acts, to the study of our readers and of all who are interested in the status of the profession.

"FIXITY OF TENURE."

THE Incorporated Society of Medical Officers of Health has had before it for consideration a report by the council embodying certain resolutions prepared by a special committee on this important subject. The two main resolutions were: (1) "That in the opinion of your council it is desirable in the interests of public health that medical officers of health in the provinces should, subject to the approval of the Local Government Board, have the same fixity of tenure as medical officers in the metropolis; (2) that in the opinion of your counci the Local Government Board should be asked to make fixity of tenure dependent on such an arrangement of sanitary areas and salaries as will secure medical officers of health of suitable qualifications and the carrying out of necessary sanitary improvements." At the meeting of the society held to discuss the council's report it was decided by a majority of one (10 votes to 9) to delete the second resolution. The effect is to resolve that fixity of tenure should be unconditional. We doubt whether this is quite a wise decision. It is certainly in the interests of sanitation that every health officer should be in a position to act without fear or favour, and, so far, the resolution is most commendable. But it is also in the interests of sanitation that administrative areas should be large and should be supervised by medical men who are not engaged in private practice. In some degree these two interests would clash if resolution No. 1 were carried into effect without qualification. The permanency of appointment of a single officer, with a small district and a small salary, might have the effect of preventing the creation of a large combined area to include all the small districts of the neighbourhood. In Scotland, under the Local Government Act of 1889, a very satisfactory way was found out of a similar difficulty. Power was given to abolish all or any local health appointments which were found unnecessary under the new system of large sanitary areas, but the abolition was in every case to be accompanied by such compensation as would

apply to civil service appointments similarly dealt with. This, we venture to suggest, is the *via media*—the golden way it might be called—out of the present difficulty. To make fixity of tenure apply only to appointments in which private practice was to be debarred might in some cases have a very bad effect. Some short-sighted sanitary authorities willing on general grounds to join a combination might refrain from doing so because, the combination involving a whole-time appointment, power to dismiss the medical officer would disappear, while by remaining isolated and continuing to employ a medical man in general practice the power of dismissal would remain. To such a proposal, therefore, there would be objection perhaps quite as strong as that which applies to the decision arrived at by the 10 to 9 majority. The correct way is to subordinate purely private interests to the public good, but at the same time to give adequate compensation for loss of office. Wherever a proposed large scheme is looked on favourably by adjoining local authorities the whole proposal should not be liable to be thwarted by the existence of a medical officer in one part of the area having an expectation of life extending, perhaps, to thirty or forty years, and not being subject to dismissal even under compensation. At the same time no unrelievable hardship ought to befall the officer through deprivation of office. We repeat that the experience of the northern kingdom, where many ex-officials are now in receipt of pensions corresponding to their former salaries, should be utilised in dealing with the question as it applies to the provinces in England.

HEALTH IN THE POST OFFICE SERVICE.

IN a recent annotation[1] we drew attention to the evidence of Mr. Arthur Wilson, chief medical officer to the General Post Office, before the Departmental Committee presided over by Lord Tweedmouth, on Dec. 6th last, at the House of Lords. From the figures given by Mr. Wilson it appeared that the health of the employés, who do not consider themselves a very healthy body, compared more than favourably with men of the same age engaged in other occupations. His statistics were, indeed, surprising considering the nature of the post office employés' occupation, as the death-rate for the whole of the staff was given as 4·2 per thousand, a rate lower than that of the clergy between the same ages. This has called forth a rejoinder from the telegraph staff of the General Post Office, in which they state that "the assumption underlying the whole of the medical officer's evidence is that 4·2 represents a class mortality and it is compared with class mortalities, whereas it only represents the mortality of those dying on full pay. On showing signs of serious ill-health likely to result in ultimate death men are invalided from the service and it is notorious that few persons long survive their retirement." The death-rate as given in the rejoinder is 10·5, but this, it is explained, probably under-estimates the real rate. In THE LANCET of Aug. 1st, 1885, in the course of some remarks on the conditions of the work of telegraphists, we made the following remarks:

"His [the telegraphist's] work is mental and it is also monotonous. It involves long harping on one chord of his intelligence, with but little intermission and little variety. We have frequently to do, therefore, with a badly nourished brain, subject to sustained impulses passing along the nerve of hearing and obliged by concentrated and generally uniform effort to convert these into visible expressions. Thus the brain, losing the exercise of invigorating reflection and acting merely as a higher reflex centre, is apt to be driven to exhaustion by sheer wear-and-tear of certain lines of its nervous tissue."

This passage, which was referred to by Mr. Garland in his examination by the Departmental Committee, was put to Mr. Wilson for his opinion, when he replied that he did not think the conclusion arrived at a proper one. The work of a telegraphist, he said, becomes mechanical after a certain time and would not cause wear-and-tear. In an annotation in our issue of Aug. 31st, 1895, on the "Grievances of Telegraph Service Clerks," we commented on the absence of reliable statistics, remarking that from some suggestions made by Mr. Spencer Walpole it would seem that better statistics are accessible, and expressing the hope that they would be laid before the committee. These figures have, however, not been forthcoming, and in their absence it is impossible to decide as to the merits of either the official or the employés' figures. Until the authorities produce reliable and accurate data, however, the benefit of the doubt may be given to the employés.

[1] THE LANCET, Dec. 14th, 1895.

LOCAL ANÆSTHESIA IN SURGERY.

DR. THEOPHILUS PARVIN, writing in the Philadelphia *Medical and Surgical Reporter*, gives an interesting account of the utility of the system of local anæsthesia introduced by Dr. Schleich of Berlin and obtained by the hypodermic injection of solutions of cocaine of varying strength. The most generally useful solution consists of 2 parts chloride of sodium, ¼ part of muriate of morphia, and 1 part muriate of cocaine in 1000 parts of water, 20 drops of a 5 per cent. carbolic acid solution being added to each litre. Of this solution 100 c.c. may be used for an operation. Each injection causes a white weal, near the circumference of which another puncture and injection are made, and so on till the part to be incised has been rendered insensible to pain, the line of incision corresponding with the line of punctures. The insensibility of the skin lasts for a time varying from fifteen to twenty minutes. Dr. Schleich uses this local anæsthesia not only in minor surgery but even for abdominal operations such as cholecystotomy and ovariotomy.

THE WAIL OF A FRENCH PHILANTHROPIST.

PROFESSOR E. MASSE of Bordeaux, editor of the interesting *Gazette Hebdomadaire des Sciences Médicales*, like all patriotic Frenchmen, is gravely concerned at the threatened depopulation of his country, and with reference to "the slaughter of the innocents" expresses himself in a recent number[1] to the following effect: "France loses one-sixth of her infants before they attain to the age of one year, and the pity of it is that, with a little more care, a great number of them could be saved. Mothers ought to suckle and bring up their own children. Out of 94,000 *enfants assistés* (that is, put out to nurse at the expense of the State) the average number of deaths last year was equal to 68 per cent. M. Lagneau, who drew the attention of the Académie de Médecine to this lamentable fact, is of opinion that the amount allowed for the upkeep of derelict infants is not sufficient; and he likewise advocates the subvention of poverty-stricken mothers who, nevertheless, strive to fulfil the duty towards their offspring which has been imposed upon them by nature. The law recently passed for the protection of infants ought to be far more rigorously enforced." In this country we are not at present confronted with the problem of a diminishing population which is so disquieting to our neighbours; but who shall say that the generation now growing to manhood will be equally fortunate? From "answers to correspondents" in various periodicals and other sources of information which it is impossible to ignore (we published a letter on the subject headed "A Horrible Trade" in THE LANCET of Feb. 1st), there can be no doubt that the practice of preventing conception is on the increase in our midst. One journal in particular

[1] Jan. 19th, 1896.

has made itself notorious for its unblushing advocacy of what the editor calls a judicious limitation of families and has likewise asserted more than once that medical men are in the habit of teaching their clients how to commit this sin against physiology. We are not now concerned to defend the members of an honourable profession against this ignoble slander. An educated man who could be content to prostitute his knowledge in such a manner would deserve to be classed with Sir Pandarus of Troy. There is one point, however, connected with the distasteful subject about which a few words may be advantageously said. Whenever man attempts to defeat nature's ordinances the results are certain to be sooner or later disastrous. Abstention from coition where there is no excitement is probably not injurious; but when the sexual appetite is habitually stimulated in an incomplete and unnatural manner one or other of the misguided participators in the act, if not both, must inevitably suffer. The practice of restricting the birth of children may possibly become widespread, but it never can become universal. The improvident, the unstable, and the vicious will always continue to propagate as before, and in this way, if there be any truth in the doctrine of heredity, the relative proportion of the unbalanced will gradually augment until in the end they become preponderant in the land. We have based our argument here chiefly on physical premisses; but besides the moral aspect of the case, which is more especially the concern of teachers of religion, it has also its æsthetic or sentimental side which must appeal to everyone possessing a refined nature. Finally, if an object lesson be needed to enforce our views we have only to point to France. The French are said to be the wealthiest nation in Europe, but what is the good of money without men?

AN OVERDOSE OF STRYCHNINE.

A MEMBER of the profession has sent us an account of his unpleasant personal experiences after an overdose of strychnine. He had for some days been taking once a day after dinner three to five drops of liquor strychninæ, B.P., but on a certain evening he carefully "poured out ten drops," which he mixed with two drachms of a solution of sulphate of quinine of the strength of one grain to the drachm. This was well diluted with water and two drops of liquor arsenici hydrochloricus were added. Half an hour after taking this draught he began to feel uneasy and restless, and found he could not walk about with comfort. A little later he lost control of his legs, which felt tense and jerky. He then noticed some slight stiffness in the facial muscles and found there was a distinct tendency for the corners of the mouth to be drawn up. He felt better when lying down, but any attempt to move excited spasm of the muscles of the legs and thighs. He took twenty grains of bromide of potassium and about an hour after the first appearance of the symptoms he sent for medical aid, but meanwhile slight convulsions with distinct opisthotonos had set in. Although the mind is usually said to be absolutely clear, the patient found concentration of thought difficult and he remarks that, although doubtless under ordinary circumstances he would have remembered chloral as the proper physiological antidote, its very existence never entered his head. Nearly an hour passed before medical assistance arrived, and by this time the patient was conscious of being in extreme danger; the slightest movement was accompanied by a convulsion of the whole body, with well-marked opisthotonos and with sudden contraction of the muscles of the chest. Breathing was now difficult, but the diaphragm appeared to be working well and fully under control. A quarter of a grain of morphine was injected subcutaneously, and, as the convulsions continued, twenty minutes later another injection of one-eighth of a grain of morphine was given. From this time the spasms gradually declined, he vomited freely, and then slept at intervals from midnight until about 7.30 A.M., when the symptoms were practically at an end, though for many days he felt tired and disinclined for work, and the muscles of his chest remained acutely painful on any exertion. This case presents many interesting features; assuming that ten minims of liquor strychninæ was the dose taken the symptoms were very severe, but the patient admits that possibly, while talking, he might have poured out two teaspoonfuls of the strychnine instead of the quinine solution. The early affection of the facial muscles is also unusual, and the patient doubts very much whether any of the muscles were quite relaxed in the intervals between the paroxysms; the legs were constantly jerking and it seemed impossible to bend them as they felt as stiff as boards. Our *confrère* is distinctly to be congratulated upon the successful issue of an unpleasant experience, but we doubt whether, even in the interests of science, he could be tempted to repeat the experiment with an undoubted dose of ten minims only.

THE BENEVOLENCE OF THE LATE MRS. STIRLING.

MANY hospitals and charitable institutions will derive considerable pecuniary benefit from the will of the late Lady Gregory, otherwise more familiarly known as Mrs. Stirling the celebrated actress. Among the larger hospitals, Westminster, Middlesex, Charing-cross, and St. Mary's have all received legacies, each £250, besides numerous special institutions. The theatrical profession have of late years been especially kind in the interest which they have taken in medical charities and have shown their feelings in a practical manner by often giving their services or lending their theatres for performances in aid of hospital funds. It is to be hoped that other professions and trades in which large bodies of people are employed will also do their best to support these charitable institutions, which treat the poor of all classes and of all denominations alike, in their desire to relieve their bodily sufferings and to restore them to health.

LANDRY'S PARALYSIS FOLLOWING INFLUENZA.

THE following case is reported by Dr. Pailhas in a recent number of the *Archives de Neurologie*, and is of considerable interest because of its close resemblance to the toxic condition following another acute infectious disease—viz., diphtheria. The patient was a man aged twenty-three who towards the end of February, 1895, while serving in the army, experienced severe headache, especially in the occipital region, and cold feelings between the shoulders. His legs also became weak and he had pain in the stomach and faintness. He was admitted in this state to the regimental infirmary. Three days later he experienced severe articular pains in the legs, which were ascribed to rheumatism, and there was at this time also a difficulty in articulation, the patient speaking slowly, pronouncing the syllables separately and pausing between the words. A fortnight after the onset of his illness the symptoms included great feebleness of the legs and of the body generally, inability to stand, and the articulatory difficulty alluded to above. The knee-jerks were completely lost; the heart was extremely feeble, only beating between 45 and 50 times in the minute, and the cardiac sounds were feeble, but otherwise natural. The hands were cold and cyanosed and the pupils dilated, but reacting to light. During the next two weeks there was slow but gradual improvement, but three weeks after the commencement of the illness it was noted that the leg muscles did not react to electrical stimulation. A week later the knee-jerk still remained absent, but the patient was able to walk, and the articulatory difficulty had almost disappeared.

He was still feeble and suffered occasionally with pains in the knees and shoulders. Three months later there was a recrudescence in a slight degree of the weakness in the legs and the pains in the joints, as well as a threatening of the articulatory difficulty, after exposure to cold. The symptoms, however, rapidly cleared up without attaining anything like the severity they had shown before; but it is to be remarked that the knee-jerks still remained in abeyance. As we have said, the case is particularly interesting on account of the fact that the disability was evidently the result of a toxic process which is said to have followed influenza. Its resemblance in many points to post-diphtheritic paralysis is very striking, in none, perhaps, more than in the continued absence of the knee-jerks after all the other signs of disease had disappeared. It may be thought, with some degree of justice, that the evidence that the primary disease was influenza is not conclusive, but there can be little doubt that the resulting condition was a toxic one.

THE LONDON COUNTY COUNCIL AND THE WATER BILLS.

ALTHOUGH, as we reported last week, the London County Council appears to have resolved unanimously on the rejection of any proposal to obtain a supplementary water-supply from the Thames, there is not the same accord shown in regard to the Welsh scheme. At the weekly meeting on Tuesday, when so much interesting discussion was anticipated, Mr. Idris's motion that the report of the Water Committee relative to Mr. Binnie's scheme of providing reservoirs in Wales should be formally received was accepted after an attempt to adjourn its reception for some weeks. Lord Onslow, however, moved an amendment to the recommendations of the committee to the effect that, while the efficiency and adequacy of the newly sought supply were not disputed, yet they considered it inexpedient to incur further expenditure until the views of the Government, who had given notice of early legislation on the subject, were made known. We understand that the Welsh scheme will involve when fully carried out an outlay of £38,000,000. The Llangorse reservoir, which would be capable of supplying 182 million gallons per day, would involve an expenditure of £96,000 for a million gallons, whereas the acquirement of 240 million gallons a day by storage will cost, it is said, over £100,000 per million gallons per day. After some discussion the adjournment of the debate was moved, but the motion was rejected by a majority of 3. Subsequently, however, it was carried by show of hands on being moved again by Mr. Lionel Holland.

THE HUDDERSFIELD POISONING CASE.

A LETTER from a correspondent, which is published in another column, recalls attention to a very interesting case which was tried at the last Leeds Assizes. In addition to the one pointed out by our correspondent the case had other noticeable features. Not the least was that it did not end fatally, this being averted by the sagacity of Mr. Demetriadi, who, seeing a man previously in good health suffering from intermittent vomiting and purging, naturally asked to have the stools and vomited matters kept, and, failing to obtain them from his patient's wife, insisted upon having a nurse upon whom he could rely. It is to be regretted that he did not obtain some of his patient's urine, which could easily have been done without anyone's assistance. The patient was suffering (as was proved eventually) from mercurial poisoning, and as globules of mercury have been extracted from the concentrated urine of patients taking ordinary doses of Donovan's solution it is clear that it would have been found in this case, the patient having had an all but poisonous dose of white precipitate. The case presented all the well-marked features of a criminal poisoning case: gross falsehoods told by the prisoner to account for her absence from home, the sordid motive of obtaining insurance and club money, the additional motive of removing her husband to make room for a more acceptable one, and the refusal to save vomited matters and excreta—the whole forming a mixture of low cunning and stupidity. Mr. Justice Grantham, in sentencing the wretched woman to twenty years' penal servitude, told her that she had been found guilty on the clearest possible evidence of administering poison to her husband with intent to murder. He also paid a well-deserved tribute to Mr. Demetriadi in adding that if it had not been for the intervention of the medical man and the care and skill he showed she would have now been standing in the dock charged with murder. The case was, he said, one of the most heartless he had had to deal with. It is to be hoped that no more complaints will be made by judges on the subject of articles sent for analysis. Quite apart from the useless expense and waste of time, there is, as Mr. Justice Grantham remarked, the much more serious probability of a mistake being made. This might cause gross miscarriage of justice.

A STUDY IN THE HUMANER LETTERS.

WE have received a little book called "Everyone his own Doctor, or the Household Medical Guide," edited by Alexander Ambrose, B.A., LL.D., M.D., B.Ch., L.M., D.P.H. Books of this class are, as a rule, "springes to catch woodcocks" and do infinitely more harm than good. An exception, of course, may be made in the case of manuals of medical instruction for the use of missionaries, explorers, and others who live far away from medical aid; but the book in question does not come under this heading so far as we can see. The matter of the book, as far as it goes, is good. Of course there is a certain amount of risk in all cases of self-treatment, but the advice is free from quackery. There is one thing, however, against which we must make a very strong protest, and that is a "free advice coupon" inserted at the end of the book. According to the preface, "should the reader desire further enlightenment the publishers have arranged that it should be afforded him on stating his case by letter to them, enclosing therein a stamped and addressed envelope for reply, together with the coupon printed on page 254." If it be the writer of the book who will afford the advice he must know perfectly well, first, that to prescribe for a patient who has not been seen is eminently unscientific; and, second, that it is not the custom of a profession whose members are gentlemen to be "run" by publishers.

THE TRENDELENBURG POSITION IN PROLAPSE OF THE FUNIS.

THERE is an interesting letter by Dr. R. Abrahams in the January number of the *American Journal of Obstetrics* on this subject. He relates a case in which his attention was accidentally called to the value of this position in the treatment of prolapse of the cord. It was a case in which the vertex presented. On rupturing the membranes a very large quantity of liquor amnii escaped, and a portion of the umbilical cord, estimated to be ten inches in length, was carried down by the gush of the waters into the vagina. The os was fully dilated, and the best plan seemed to him to be to deliver the woman either by forceps or version as quickly as possible. The patient's surroundings were of the poorest possible description, and the bed on which she was lying was "a wide long board with four long poles as feet to rest on." While he was trying to get the patient in position for operating the foot of the bed gave way. This necessitated the raising and holding up of the foot of the

bed some six feet from the ground while the supports of the bed were being repaired. On lowering the bed after this had been at last accomplished he examined the patient, and was surprised to find that no part of the cord was to be felt in the vagina, and that the head was fully engaged. Delivery was effected quite naturally without any assistance. Dr. Abrahams ascribes the change in the condition of things to the extreme Trendelenburg position caused by raising the foot of the bed to the height above mentioned; and this appears most probably to be the true explanation of the sudden recession of the cord. He considers the Trendelenburg position much superior to the genu-pectoral position formerly recommended for these cases, as being more comfortable for the patient, but, on the other hand, it has the disadvantage of causing difficulty in breathing. Still, as the position may only have to be maintained for a short time, as in Dr. Abrahams' case, treatment of prolapse of the funis by the Trendelenburg position seems to deserve a trial.

A VACCINATION CRUSADE.

DR. FRANCIS T. BOND, the medical officer of health for the Gloucestershire combined district, is very actively engaged in endeavouring to disseminate a knowledge of the benefits of vaccination amongst a community that has of recent years lent a too ready ear to its opponents. We have already mentioned his leaflet entitled "Fifteen Reasons why we should believe in the Efficacy of Vaccination as a Preventive of Small-pox," which has doubtless set many people thinking; and Dr. Bond has followed this up by other writings advocating the formation of a society to be called "The Jenner Society," to promote the diffusion of knowledge of the history of small-pox and the value of vaccination as a preventive against it; to promote legislation to put vaccination on a more satisfactory basis; to improve the practice of vaccination, and generally to facilitate the adoption of analogous methods of preventive and curative medicine. We cordially wish success to this movement, which is fittingly initiated in the county identified with Jenner's work 100 years ago.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

THE medical registrar of the Middlesex Hospital sends us the following statistics showing the results of the treatment of diphtheria by antitoxin at the Middlesex Hospital during 1895. Full details of the cases will subsequently be published in the annual reports of the registrars of that hospital. The remedy was obtained from the British Institute of Preventive Medicine. For purposes of comparison the rate of mortality, the number of deaths, and the total number of cases admitted are given for the previous five years:—

Year.	Number of cases admitted.	Number of deaths.	Mortality.
			Per cent.
1890	14	5	35·71
1891	19	11	57·89
1892	25	16	64·00
1893	52	22	42·30
1894 (antitoxin given in 9 cases) ...	45	11	26·66
1895 (antitoxin given in 29 cases)...	34	6	17·64

Of the 34 cases admitted in 1895 29 were treated with antitoxin and 4 died, yielding a mortality of only 13·79 per cent. Of the 5 cases not so treated 2 died, showing a mortality of 40 per cent. That these 5 cases were not more severe than the others will be seen by the following considerations: 14 of the 34 cases were instances of diphtheria affecting the fauces and pharynx only, no symptoms of laryngeal affection presenting themselves; but of these 14 cases 3 were not treated by antitoxin (thus accounting for 3 of the 5 cases). Such cases usually recover, and no deaths were recorded amongst the 14 cases. Extension to the larynx occurred in 14 cases; 1 case only was not treated by antitoxin and proved fatal; of the remaining 13, 3 died. Six of the cases were purely laryngeal in nature, no membrane appearing in the fauces. One was not treated by antitoxin and died. Of the 5 which were treated 1 proved fatal. In 11 cases the dyspnœa was so urgent that tracheotomy had to be performed. They were all treated by antitoxin and 7 recovered, an unusually large percentage. In most of the cases the diagnosis was confirmed by bacteriological cultures. With the exception of urticarial eruptions in 3 of the cases no unpleasant symptoms followed the administration of the antitoxin. Two injections were usually given, the first of 20 c.c., and the second, twenty-four hours subsequently, of 10 c.c.

THE TYNE PORT AUTHORITY AND DR. H. ARMSTRONG.

IN THE LANCET of Nov. 9th last we drew attention to the circumstances under which Dr. Armstrong resigned his position as medical officer of health to the Tyne port, on the ground that he could not with due regard to his own dignity any longer serve that body. Notwithstanding this, however, Dr. Armstrong not only consented, when he heard no successor to his office was available, to serve the port authority up to the end of the year, but also to write a report on the sanitary state and proceedings of the port for the whole of 1895; but he takes occasion in that report publicly to protest against the attitude adopted towards him by a small but irrepressible section of the authority. We think Dr. Armstrong has done well, in view of the special circumstances and of the very undignified proceedings of the authority, to enter this final and official protest against such action. It may perhaps save his successor from similar puerile and personal opposition and accusations; but even this prospect does not look altogether promising, for we learn from the report which gives an account of Dr. Armstrong's resignation that the assistant medical officer of health has since taken the same step. Dr. Armstrong is to be congratulated on his action and on his attitude throughout this matter.

LUNACY IN HAMPSHIRE.

AN interesting report on the previous year's work was submitted on Feb. 11th to the county council by the committee and medical superintendent of the Hants County Asylum at Knowle, near Fareham. First, overcrowding was mentioned. The asylum has room only for 983 patients, and at the present moment there are 1072 persons under treatment, notwithstanding the fact that a block for idiot children, now taking 15 patients, and in addition giving sleeping room for 30 chronic female patients who had for the last two years been sleeping in the medical officer's house, has been opened. Additional beds, too, were available on both sides when the new sanitary spurs were completed, 25 patients of each sex taking the room formerly occupied by the lavatories &c., but the day accommodation remains as aforetime. Two things, however, will tend to relieve this congestion. The Isle of Wight patients have during the last five months been charged for as out-county cases, and as soon as the new asylum for the island is completed they will be removed. There are 72 males and 112 females chargeable to the island. Southampton, too, has been enlarging the borders of its county borough by the inclusion of the South Stoneham Union, and so 51 patients formerly chargeable to the union have now been transferred to the county borough, and are liable to be removed if necessary. The medical superintendent's report contained several points

of interest. Typhoid fever of a very mild type appeared in a few instances, and in two cases—one male and one female—the patients, when convalescent, regained their sanity. The infirmary and the female side were especially crowded, but the general health was good and the death-rate for females was very low—viz., 5·8 on the average numbers resident, and 4·9 on the total numbers under treatment. The male figures respectively were 11·9 and 9·6. On the last day of the year there were 1072 patients (486 and 586), an increase of 30; during the year 119 males and 115 females were admitted, and the discharges had been: Recovered, 36 and 52; relieved, 5 and 8; not improved, 9 and 3. The deaths were 57 and 34; total cases under treatment, 593 and 683; average resident cases, 478 and 578. The admissions showed little variation, although the tendency to send old people from the workhouses was mentioned; the discharges were more numerous, and the percentage of recoveries on admissions had risen from 32·5 to 37·6; the death-rate had fallen from 10·6 to 8·8. Of the extra 30 cases, 10 came from three parishes which had been taken over by Hampshire from Wiltshire.

THE NEW PHOTOGRAPHY.

THERE is little that is new to report this week in regard to the application of the "x" rays. Direct vision of the invisible by Professor Salvioni's method is, as we ventured to suggest last week, likely to open up a more promising field so far as medical diagnosis is concerned. With the assistance of Mr. J. C. M. Stanton, Mr. A. A. C. Swinton has, we learn, confirmed Professor Salvioni's experiments and has succeeded in obtaining visible shadows of coins inside a leather purse, metal instruments enclosed in a case, &c. The apparatus consisted of a tube of opaque pasteboard, with a simple aperture at one end serving as eye-piece. The other end was closed with an opaque diaphragm of double black paper, upon which on the inner side was laid a piece of blotting paper previously saturated with a solution of platino-cyanide of barium and dried. The case containing the object was held against the diaphragm with the Crookes's tube beyond it, so that the rays proceeding through the wood &c. cast a shadow of the imprisoned objects on the fluorescent screen. The platino-cyanide fluoresced brightly under the stimulus of the rays on those portions of the blotting paper where no shadow was cast and threw the dark image of the object into clear relief. Thus, the impedimenta of photography are done away with, and it may be before very long that the outlines of the bones in the flesh will be directly viewed by this means. We still need, however, a more reliable and a more convenient source of these mysterious "x" rays.

DIAGNOSIS OF GASTRIC DISEASES.

IN comparison with diseases of other organs the methods of diagnosis of diseases of the stomach have received but comparatively little notice in our current literature. An article by Dr. Boardman Reed in the *Medical News* of New York of Jan. 18th is of especial interest in that it defines minutely the methods of diagnosing certain conditions of the stomach frequently met with but seldom recognised in ordinary medical practice. The paper is entitled "The Diagnosis of Changes in the Size, Position, and Motility of the Stomach in Cases where Intra-gastric Instruments cannot be Used." It deals almost entirely with two methods of physical examination—*clapotement* and percussion. Dr. Reed is of opinion that it is best to examine the patient at a time when the stomach should be entirely empty—that is, the morning, fasting, or six hours at least after the last meal. If after that period the splash by *clapotement* can still be obtained we can infer deficient motility. Noting at the same time the lowest point where the splash can be distinctly heard, we may infer as a rule that the lower boundary extends to about that level. The abdomen should then be percussed in various positions to verify the result of *clapotement* and to map out the boundaries. The patient then drinks from one-eighth to one-fourth of a litre of water, and another attempt is made to obtain the splash; if it is obtained after the smaller amount it raises a question as to the motility. Percussion of the boundaries of the stomach with the viscus partially full and the patient standing is then performed. The water should be given gradually, when if the stomach is atonic the area of dulness usually extends downwards with each successive glass, but if its muscle is healthy and strong the dulness extends upwards only or mainly. Dr. Reed differentiates nine conditions which may be recognised by these methods:—1. Normal stomach. If empty, no splash is heard until the viscus is partially full, and then it may still be absent or only very feebly heard. Percussion will demonstrate the normal boundaries. 2. Atonic stomach. The splash may be heard from four to six hours after a full meal, but it is easily obtained after the drinking of a small quantity of water. Percussion will show delayed emptying of the organ. 3. Stomach enlarged, but motor power strong (megalogastria of Ewald). The lower border of the stomach is at the level of the umbilicus or lower. No splash is obtainable six hours after food. 4. Stomach enlarged and motility weak (dilatation or gastrectasia). The splash is obtainable six hours after a meal. Percussion shows enlargement of the organ nd delay in emptying itself. 5. Gastroptosis. The stomach is wholly displaced downwards, but otherwise normal. The splash is usually more easily obtainable than normal. Percussion shows descent of both upper and lower boundaries. 6. Stomach enlarged and displaced downwards as a whole, but not dilated. The same as in No. 5 except that on percussion the upper boundary is not so much displaced. 7. Stomach wholly displaced downwards and dilated. The same as in No. 6, but the splash is obtainable too long after a meal. 8. Pyloric end of the stomach displaced downwards to the left (pyloroptosis), but without dilatation. The splash is obtained far below the level of the normal lower border. Percussion reveals the pyloric end low in the abdominal cavity. 9. Pyloroptosis with dilatation. The same as in No. 8, but the splash is more pronounced and is found too long after food or drink. Percussion shows also a widening of the pyloric end of the stomach.

INQUEST PRACTICE.

TWO points of considerable interest arose at an inquest recently held at West Hartlepool. It appears that a man named Joseph Aspinall whilst travelling between Hartlepool and West Hartlepool fell down apparently in a fit and died. It so happened that Dr. Harte Gourley was travelling in the same train. When called to the case he found the man dead. At the inquest the coroner raised the question whether Dr. Gourley's name was on the Register; the latter replied that it was, whereupon the coroner said that he must have made a mistake. If the coroner had reason to believe that Dr. Gourley was not a duly registered practitioner he was acting within his rights and in fact doing a service to the public and the medical profession in drawing attention to it, and inasmuch as Dr. Gourley's name only appeared on the official list last year there was some excuse for the mistake made, and we trust Dr. Gourley is satisfied with the result that he was enabled to substantiate his professional status. Our contemporary, the *Northern Daily Mail*, in its report of the inquest mentions that one of the witnesses informed Dr. Gourley that prior to the deceased falling down in a fit the occupants of the carriage

had been "playing at gymnastics." We are of opinion that if such was the case Dr. Gourley was fully justified in saying that a medical man could not certify without making a post-mortem examination, and, further, it was a fit and proper case for complete investigation. We are at a loss to understand the equity of the coroner's observations to Dr. Gourley: "You want to open the body and get your two guineas fee"; and when the latter indignantly repelled the assertion it was met by such a rejoinder as "whether you want it or not you won't get it." The coroner had it in his power to order or refuse a necropsy, but surely it was not necessary to embellish his decision with remarks imputing dishonourable motives to a medical man.

MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS.

WE would remind our readers that a second meeting of medical practitioners will be held at 20, Hanover-square at 4 P.M. on Thursday, March 5th, to receive the report of the committee which met upon Feb. 13th and to discuss the propriety of medical men giving any more certificates so long as the Board persists in its unseemly attitude of revising these certificates at the bidding of a lay official. All medical men, especially those connected with hospitals or dispensaries, are earnestly invited to attend.

ANTI-TYPHOID SERUM.

IN view of the interest aroused in the profession by the recent reports on Dr. Chantemesse's experiments at the Pasteur Institute with anti-typhoid serum, and in answer to several correspondents, we may inform our readers that Messrs. Burroughs, Wellcome, and Co. are prepared to supply anti-typhoid serum in phials of 10 c. c. each. In making this announcement we do not endorse the statement of the results of the use of the remedy which have appeared in certain lay papers; on the other hand, the source of the therapeutic discovery is so good that, improbable as some of the results may seem, it cannot but receive the respectful attention of the profession.

RECENT ENGLISH MORTALITY.

THE Registrar-General's recently issued quarterly return for the last three months of 1895 and his fifty-seventh annual report dealing exhaustively with the vital statistics of 1894 enable us to consider the changes in the rates of mortality in England and Wales in recent years. During the five years 1861–65 the mean annual death-rate in England and Wales was 22·6 per 1000, whereas in successive quinquennial periods the mean rate steadily fell to 19·4 in 1881–85 and 18·9 in 1886–90. The mean rate in the ten years 1881–90 did not exceed 19·1, against 21·4 in 1871–80 and 22·5 in 1861–70. Thus, measured by the recorded death-rate, the improvement in the public health, which practically dates from the Public Health Acts of 1872 and 1875, was considerably greater in 1881–90 than in the previous decade 1871–80. The rates of mortality in 1890 and 1891 showed a decided increase owing to influenza mortality, which also, to some extent, raised the rates in 1892 and 1893. In 1894 the English death-rate fell to the unprecedentedly low figure of 16·6 per 1000. Prior to 1894 the rate had never fallen below 18, and only three times below 19 per 1000—namely, 18·9 in 1881, 18·1 in 1888, and 18·2 in 1889. The death-rate in 1895 rose again to 18·7 per 1000, showing an excess of 2·1 upon the unprecedentedly low rate in 1894, but was, with only three exceptions, lower than the rate recorded in England and Wales in any year since civil registration commenced in 1837. It is, also, eminently satisfactory to note that the mean death-rate in the first half of the current decade—that is, in the five years 1891–95—did not exceed 18·7 per 1000, against 19·4 and 18·9 in the two preceding quinquennia. Thus, notwithstanding the fatal effects of influenza, the English death-rate in the five years ending with December last was lower than in any preceding five-year period for which records exist. One of the most unsatisfactory features of recent English mortality is the absence of the due proportional decline in infant mortality, measured by the deaths under one year to registered births. During the ten years 1881–90 infant mortality measured in this manner averaged 142 per 1000; but in the five years 1891–95 the rate increased to 151 per 1000, although the death-rate at all ages continued to decline and was lower than in any previous quinquennium. This increase of infant mortality concurrently with a declining death-rate at all ages calls for careful investigation. The new English life table, based upon the mortality experience of the ten years 1881–90, which will probably find place in the Decennial Supplement which should shortly be published, will throw some light upon the relative increased expectation of life at birth and at subsequent ages, and will be full of interest.

CASE OF CEREBRAL TUMOUR.

IN the *Journal of the American Medical Association* Dr. Dufour of Washington relates a case of a woman aged fifty-six who suffered from paralysis of the muscles supplied by the third, fourth, and sixth nerves of the left side, and exophthalmos and optic atrophy in the same eye. Some months before she had been operated on for empyema of the left antrum, and when seen there was free drainage through the nostril. She was treated with iodide of potassium and mercury, but apparently with only small doses of the former drug. There was no benefit derived from the treatment, and the upper division of the fifth nerve became involved and the pain in the head intense. A re-opening of the antrum gave a little relief for a few days only. Her condition gradually deteriorated, the right optic nerve began to atrophy, word deafness became manifest, and her mind wandered. She died about a year after she was first seen. At the necropsy there was found to be a gumma of the dura mater in the anterior part of the middle fossa involving the left temporo-sphenoidal lobe. This growth surrounded the internal carotid artery and the left optic nerve and exerted pressure on the cavernous sinus of that side. A second gumma was found in the left olfactory region, and a third lay in the angle at the right of the optic commissure. The last-mentioned lesion probably accounted for the late affection of the right optic nerve.

THE LEICESTER BACTERIOLOGICAL INSTITUTE

GREAT changes have come over the relations between medicine and microscopy during the last twenty years. Not long ago the entire outfit of a microscopist was quite portable, and for medical work the manipulations requiring most practical dexterity were staining, injecting, hardening, and section-cutting; but the discovery of cultivable pathogenic micro-organisms forthwith converted the microscope-room into a laboratory provided with sterilisers and incubators and plentifully furnished with tables and shelves for glass flasks and test tubes. Previously to this the term laboratory was used chiefly to signify a building in request among chemists, and incubators were a specialty of the embryologist, being required for hatching fowls' eggs. In towns where medical schools existed the requisites for conducting bacteriological research were in course of time introduced, but other places had no such facilities until Messrs. John Richardson and Co. of Leicester fitted up the Leicester Bacteriological Institute in the Stanley-road and placed it under the control of the Leicester Medical Society. Practitioners in the Midlands have thus at hand the means of carrying on original research work in the investigation of

infectious and other diseases, and also of obtaining expert opinion upon the nature of any exudation suspected to be pathognomonic. Messrs. Richardson and Co. have published a series of photographic views of their laboratory, as well as of the outbuildings and meadow where horses are kept for the supply of antitoxic serum. Dr. C. H. Marriott, surgeon to the Leicester Infirmary, is chairman of the council of management.

ANKYLOSTOMIASIS IN BARBADOES.

WE are informed that the ankylostomum duodenale has been recognised for the first time in Barbadoes by Dr. Cuthbert Bowen and Dr. Wm. Briggs Clarke, resident physician at the General Hospital. There is a special interest attaching to this discovery, since thirty years ago Dr. Wucherer identified this parasite in fatal cases of "cachexie aqueuse" in Brazil, and the malady known by this name was, according to Professor Hirsch, first described by practitioners in the West Indies.

THE TRANSMIGRATIONS OF A COW.

SOME three months ago an "ancient" cow suffered from a wasting disease at Glastonbury and was then killed, we suppose, to prevent its dying. The carcase was sold for 7*s.* to a gentleman named Chivers and was despatched by him to a meat salesman named Harrington, of 99, Charterhouse-street, in a hamper labeled "cat's meat" per the London and South-Western Railway, being delivered at his (Harrington's) premises with the label attached. From cat's meat the carcase entered upon a higher incarnation in the house of one Robinson, an East-end sausage-maker; but at the moment of its being cut up for sausages on Dec. 5th, 1895, a sanitary inspector entered, with the result that Robinson was fined at Worship-street Police-court in the sum of £50. The meat having been traced to Harrington, he was charged at Clerkenwell Sessions and sentenced to three months' hard labour, about as much as a vagrant gets for that mysterious "offence" known as "sleeping out." The scoundrels who sell bad meat for human food ought to be treated as the poisoners they really are. We would suggest the revival of the pillory. Messrs. Robinson and Harrington standing in this machine in St. Paul's Churchyard labeled in large letters with their names, addresses, and offences, with fragments of the cow or the sausages round their necks, would be a most wholesome sight.

THE PREVENTION OF TUBERCULOSIS.

THE eminently wise and judicial attitude assumed by Dr. James B. Russell, the medical officer of health of Glasgow, in his just-issued Report on the Prevention of Tuberculosis, referred to in our Glasgow correspondent's letter last week, makes us hope that this report will be available for general circulation. For it speaks the language of commonsense on every page and defines with precision the limits within which it is legitimate or necessary for the public health to take action in regard to tuberculosis from the point of view of the sanitary authority. It is manifest that the opinions thus expressed by one who stands foremost amongst the medical administrators of the Public Health Act and whose personal work in the sanitary improvement of Glasgow has been attended with remarkable success cannot fail to carry great weight; whilst we are pleased to note that the views that Dr. Russell propounds are in harmony with those often expressed in these columns upon the question of the infectivity of tuberculosis. Dr. Russell draws a marked line of distinction between this widespread scourge and that of infectious diseases in the popular sense. It is true, he says, that in all cases tuberculosis is gained by infection, but it is not all that can cause infection; and the application to such a disease of all the machinery of sanitary administration—as notification, isolation, disinfection, and so on—is as unnecessary as it would be vexatious and cruel. For, as he points out in speaking of phthisis—the chief form of tuberculous disease from which aerial infection can arise,—the measures of prophylaxis may almost be summed up in individual care to prevent the dissemination of dried sputum in dust, and in the general adoption of improved dwellings to avoid overcrowding and to insure ample entrance of sunlight and free movement of air. The risk of direct communication of the disease from the sick to the healthy is as nothing compared with the overlading of the atmospere with infected dust, which may be introduced with food as well as inhaled. He points out, too, that the factor of individual vulnerability is of great importance—the removal of the natural barriers to entrance of bacilli by catarrh and ulceration, and the lowered vitality of blood and tissue which enables the invading microbe to prevail in the struggle for existence. As regards the liability to infection from the consumption of flesh and milk from diseased animals, Dr. Russell, with the practical sagacity so characteristic of all his writings, urges the adoption of measures to enable the authorities to detect the presence of tuberculous disease in the living animal, and wisely suggests that more attention should be paid to the prevention of the disease amongst cattle by improving the hygienic condition of their byres. It is, indeed, not surprising that bovine tuberculosis should be so common when the animals live in conditions that are so favourable to the development of the bacilli. Of course the general rule that meat should be thoroughly cooked and milk boiled before being used for human consumption are precautions which partake of the same essential character as that of preventing the drying of expectorated matters and the dissemination of tuberculous dust. Dr. Russell's report is scientific and practical; it has, moreover, a literary charm which renders it very attractive. We can only reiterate the hope that it will be widely disseminated.

HEREDITARY CEREBELLAR ATAXY.

IN the *Journal of Nervous and Mental Diseases* is a short account of the condition of a patient shown by Dr. Joseph Collins at a meeting of the New York Neurological Society. The patient was a boy aged eleven, the second of two children. Both parents were living, but there was no history of any similar conditions in former generations. The sister of the patient, however, who died at the age of two years, had apparently suffered from the same disease. The patient was able to begin to walk and speak about the usual time, but he had never been able to walk like other children, and his speech had never been natural. He was always "stiff in his joints" and there was a constant tendency to fall as he walked. He attended school after the age of five years, but was never able to make any progress, and finally, a year before the date on which he was shown at the society, he was dismissed from school on account of his inability to learn. For a year or more it is said he had now and again lost the use of his left side, and at those times his arm and leg became unsteady and his speech unintelligible. When shown he was tall for his years, his face looked old, and his skin dry. There was weakness of the left side of the face, the grasps were very feeble, and the gait shambling and reeling. There was exaggeration of the knee-jerks and slight ankle-clonus was present. The genital organs were undeveloped. He rose with difficulty from the recumbent position, his method of doing so resembling that of a patient with pseudo-hypertrophic paralysis. There were slight weakness of the external recti muscles and progressive myopia but no optic atrophy. The articulation was thick and ataxic and sometimes very

jerky. Although he was affectionate and fond of animals and pictures he was very deficient mentally. Dr. Collins regarded the case as one of "hereditary cerebellar ataxy," a disease to which Nonne in particular has directed attention. The hereditary character is not constant, but the disease is one of the group of family diseases, and its close relationship to Friedreich's ataxy is obvious. Dr. Collins's case differs in some respects from cases of this disease hitherto described, but the correspondence in general character of the symptoms is probably sufficient to stamp it as belonging to the same class.

INVITATIONS TO TENDER FOR THE POST OF HEALTH OFFICER.

THE Farnborough Urban Council have succeeded in lowering the status of medical officer of health in their district to a level which, we venture to hope, is nowhere else even thought of. Just as sanitary authorities ask scavengers to tender for the removal of filth so that it may be done on the cheap, so have the Farnborough Council invited tenders for the first time in this country for the work and duties of medical officer of health; and we cannot but regret to add that they received tenders as the result of their trade advertisement. The Local Government Board seem to have done all they could to frustrate this attempt at putting professional services on the lowest trade level; for, having seen the advertisement, which applied to the post of inspector of nuisances as well as of medical officer of health, they informed the district council that they should hold any appointments made under that advertisement as invalid. But this difficulty can be evaded, for, according to the *Aldershot News*, the council will readvertise at the salary which they have decided to give on the tenders received, and then appoint the officer of health whom they have selected under the new advertisement. The introduction of this commercial phase into professional appointments deserves the serious consideration of the medical profession as a whole. Even artisans and workmen have combined against being undersold, and the medical profession may have to adopt similar procedures with regard to clubs and public appointments. The matter will, in the first instance, doubtless be dealt with by the Incorporated Society of Medical Officers of Health.

A FIRST COURSE IN EDUCATION.

THE fact that some regard for the demands of appetite is usually associated with intellectual discussions is not a peculiar characteristic of any one people or state of society. The dining table, which in these islands constitutes a signal of concourse to groups of men who agree for the time to think, speak, work, or give in common, is only our national symbol of obedience to a world-wide custom. Other peoples in like spirit exhibit their conformity to the same ruling principle. Not even savage tribes are exempt from its control. The calumet, the gourd of maté-tea, with a variety of other means of solace, both civilised and savage, testify to a universal agreement in activity between the forces of mind and body. It was recently asserted that the Chancellor of the Exchequer had discovered one more illustration of this truth in connexion with the still-nascent University of South Wales and Monmouthshire. A very large proportion of the Government grant of £3000 was said to have disappeared in the form of refreshments. The representatives of learning in the Principality had evidently not been backward in vindicating the claims of intellect upon the senses. The young university, like a vigorous boy, required food for its healthy growth and it had been satisfied. It was further suggested that other grants from private persons might be applied to a like purpose. The suggestion, generous though it is, will not be taken up. We are assured by the treasurer of the University that it is groundless and unwarrantable. The authorities will have none of it. Donors of funds may therefore give to the cause of education with a prospect of receiving their money's worth in the actual service of learning. Some initial outlay on entertainment was doubtless excusable and even advisable. Whether the limits imposed by a wise economy have been exceeded or not we are not in a position to state; at all events the indispensable festival is over and the time for work has come.

THYMUS EXTRACT IN GRAVES'S DISEASE.

IN a recent number of the *Boston Medical and Surgical Journal* Dr. Edes reports a case of a woman aged thirty-four who, after much personal worry and anxiety, became nervous, emotional, and sleepless, and had severe pain in her neck, chest, and arm. On admission to hospital she was found to have an enlarged thyroid gland, prominent eyes, and a rapid and irregular heart. There was a slight systolic bruit to the left of the sternum. She was at first treated with dried thyroid gland, but without benefit. Later she had a course of bromide of potassium, then splenic extract of two kinds, and the restlessness diminished somewhat, although the rapidity of the pulse remained unaltered. She began finally to take an extract of the thymus gland. She continued this for two months, but without very marked benefit. She was, however, discharged "relieved." She was seen two months later, when she had been a month without taking the thymus gland. She had attempted to go to work, but had not been fit for it. She resumed the thymus gland and the pulse a month later was 94. She was feeling much better and was able to resume work. She was last heard of as employed actively at a shop during the busy Christmas season. Dr. Edes mentions several other cases in which thymus gland has been given, and in many apparently with such good results as to justify more extensive trial.

ON Monday last the executive committee of the General Medical Council met and had various matters of importance under their consideration, including returns on the disciplinary functions of the examining bodies and communications with the Privy Council Office on the subject of the appointment of assistant examiners to the Apothecaries' Hall of Dublin.

AT a meeting of the Middlesex Hospital Medical School Committee on the 22nd inst. Dr. Arthur Robinson of Owens College was nominated to the Lectureship on Anatomy, and Dr. R. A. Young, B.Sc., to the Lectureship on Physiology, to fill the vacancies occasioned by the retirement from these offices of Mr. Bland Sutton and Mr. B. T. Lowne respectively.

HIS ROYAL HIGHNESS THE PRINCE OF WALES, K.G., will lay the foundation stone of the new out-patient department of the Sussex County Hospital, Brighton, on Satur ay next, Feb. 29th, at 12.30 P.M.

WIGAN MEDICAL SOCIETY.—The annual meeting of the above society was held on Feb. 12th, when the following office-bearers were elected for the ensuing year:—President: Mr. C. R. Graham, M.R.C.S. Eng., L.R.C.P. Ed. Committee: Messrs. C. R. Graham (President), W. Mitchell Roocroft (ex-President), Monks, Brady, Cowan, Benson, and Molyneux. Treasurer: Mr. G. H. Monks, L.R.C.P. & S. Ed. Secretary: Mr. Wm. Berry, F.R.C.S.I. The annual dinner was then held. There were a good number of members and visitors present, amongst whom were Professor Banks (Liverpool), Dr. Ashby, Mr. Judson, Dr. Bury, and Dr. Donald (Manchester).

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER IX.

The First Ten Years of THE LANCET.—*Their Stormy Character.*—*The Question of Copyright in Lectures.*—*Sir Astley Cooper.*—*His Opinion on the Publication of His Lectures.*—*His Detection of the Unknown Editor.*—*An Amicable Compromise.*

FOR the first ten years of its existence THE LANCET was a duelling ground for a series of fierce encounters between the Editor and the members of the privileged classes in medicine. The lectures of certain of the great hospital surgeons and physicans were reported in its pages to the exasperation of the deliverers and the delight of the profession at large and the students. The great men feared lest their fees as teachers in the metropolitan schools should diminish if the cream of their teaching could be bought for sixpence a week instead of for £5 a session; while every medical man or student, unable by circumstances to attend the classes of his leaders, rejoiced in the chance offered to him of acquiring familiarity with their methods and theories through the medium of print. The meetings of the medical societies, again, were reported at the length that their importance warranted—a proceeding which the officials of the societies objected to as an infringement of the copyright; for this they considered that the editor of the Transactions of the society, a person appointed by themselves, enjoyed as a matter of common sense as well as common law. Briefly from the beginning the hospital surgeon and physician were ranged in unbroken phalanx in opposition to the new and, as they considered it, mischievous journal. The officials of the medical societies followed suit; and the office-bearers in the medical corporations, the practices in two of which were scathingly reviewed in early issues of THE LANCET, were not slow to scent their foe. Everyone who had anything to gain by the peaceful reign of existent methods in school, hospital, or corporation—a definition which included most of the influential members of the profession—looked with uneasiness at the growing power and popularity of the new journal.

Wakley, for his part, was quick to discover his enemies, and their tactics dictated his. He found himself denounced as a literary pirate and a disseminator of moral garbage. His replies were chiefly in the nature of reflection on the complete and fretful ineptitude of his denunciators. He pointed to his growing circulation, scattered with doubtful taste but cruel point a few nicknames, and hinted at astonishing revelations of abuses arising out of the fact that publicity had hitherto been avoided by hospital officials. As a natural pendant to his assertion that the elections to the staffs of the various metropolitan hospitals were made at the instigation of pure nepotism, accounts were given in the pages of THE LANCET of maladministration in the schools and malpraxis in the wards. And upon these came action and cross-action. Certain of the criticised were compelled to proceed legally against their critic, while their defence outside the law-courts, too keenly and bitterly undertaken by friends or rival journals, on more than one occasion laid the defenders open to counter-charges of misrepresentation. In the first ten years of the existence of THE LANCET the Editor was engaged in no less than ten actions, his opponents being eight separate persons. The proceedings in these actions will be detailed in full in ensuing chapters, for they constitute a most interesting phase in the history of medical reform. It is sufficient here to state, as indicating the sort of lines upon which THE LANCET was conducted, that six of these actions were actions for libel, the aggregate sum of £8000 being claimed for damages, and the aggregate sum of £155 0*s*. 0½*d*. being awarded, while the Editor's costs were largely defrayed by public subscription. The best method of dealing with these years will not be to treat the events in strict chronological order, for these at times occurred so thickly that their consequences were constantly overlapping, and a narrative of them would make the story almost impossible to follow, even if the reader were assisted in the most careful and elaborate manner by dates. It will be better to consider one case or set of cases separately from start to finish, and at the conclusion of the first decade of THE LANCET'S work to summarise the work accomplished, the battles lost and won, and the good or ill done to the world and the medical profession.

Wakley's first contest with the law in the character of Editor of THE LANCET does not provide any sensational material. It was the longest and most expensive suit that he was ever engaged in, and the real question at issue was a much broader one than was stated in the pleadings or than is represented by the precedents which Lord Eldon's judgments have since formed. It was the question of the legality of the publication of certain lectures addressed to medical students by Abernethy, at that time the senior surgeon at St. Bartholomew's Hospital, and the person of professional eminence selected by Wakley to succeed Sir Astley Cooper as the chief attraction in his columns. For the publication of Sir Astley Cooper's lectures in the place of honour of the new paper had proved a fine stroke of journalism—of that there can be no doubt. The lectures possessed all the qualifications that an editor would shrewdly desire for his most important articles. They were excellent in material, wise, practical, easy to follow, and really informatory and valuable. A large class of readers might be expected to constantly buy a paper which contained such contributions. To those seeking instruction in the broad roads of surgery as much as to those desirous of revising their knowledge of the obscurer by-paths the light shed upon their course from the clearest surgical intellect of the day was equally valuable; and the Editor could confidently count upon a regular *clientèle*, desirous of obtaining such help and such only from the paper and quite indifferent to questions of medical policy or medical reform. In short these lectures attracted and held readers. Hardly less important from a business point of view was the prestige that their publication conferred at once upon THE LANCET. For they had what first-class and useful work does not always have—that is, a widely known and distinguished name appended to them. Sir Astley Cooper's was at the time a name to conjure with. He was at the very highest point of his professional fame, his unrivalled surgical reputation being enhanced by his wealth, his handsome person, his popularity with his pupils, his recent title, and his acknowledged position in the social world. It was impossible for the public or the profession, for rival journals or for the frightened owners of vested interests, to really cry down THE LANCET as a worthless gutter production while Wakley was issuing in its pages week by week the work of such a man, and doing so without formal protest from the lecturer. The plan was tried with exemplary assiduity by numerous persons for upwards of ten years, but the note of scientific importance once struck by the Editor gave the key to his journal.

That Sir Astley Cooper himself did not resent the publication of his lectures in THE LANCET is certain. We have his own opinion on the matter, as stated to his

[1] Chapters I., II., III., IV., V., VI., VII., and VIII. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, and 22nd, respectively.

faithful surgical class, who were prepared to uphold his view and would certainly be prejudiced towards a policy of remonstrance, as such a policy would have been in support of privileges of their own for which they had paid. The following is the first allusion made by Sir Astley Cooper to the publication of his lectures in THE LANCET, and it cannot be said to contain any sort of protest against Wakley's proceedings:—

"In detailing to you the errors into which surgeons have fallen I execute a very unpleasant task—a task much more disagreeable now, from the publicity which my lectures receive, than at any former period; but, as your pilot, it is my imperative obligation to warn you against those shoals and rocks which have foundered but too many of your predecessors. He who publishes the lectures, however, cannot be too particular in his discretion with regard to publishing names when those names are blended, as they sometimes are, with unfortunate cases.

"When I found, week after week, that my lectures were published, and that consequently I was daily paragraphed in the newspaper, I called upon the Editor of THE LANCET and told him that I was about to move for an injunction. He replied, 'That will not be of any use.' Well, gentlemen, in the end I told him that if he omitted my name I should take no further steps in the matter. He promised to do so, and as far as I have seen he has fulfilled his promise; and, of course, I have fulfilled mine. Indeed, the lawyer's instructions to counsel have been this very day destroyed.

"Now, gentlemen, though I did not regard the publication of my lectures I felt myself disgraced and degraded by my name forever appearing in the diurnal press. Not a paper could I see but my name flourished in it in some form or other. This looked so much like quackery, so much like puffing, that I am unable to describe to you how much it annoyed me. Although the publication of my lectures exposes me to the critical ordeal of my professional brethren, yet I fear it not; I care not who may be made acquainted with the doctrines I advance, the instructions I give, the principles I inculcate, while in this theatre. Therefore I am perfectly indifferent as to who publishes them, and equally indifferent as to who may be made acquainted with them."

This cannot be regarded as unqualified disapproval of a dedication to the public of property hitherto considered private. Sir Astley Cooper's attitude may be called professional but friendly. He had the foresight to know that wide dissemination of correct surgical teaching must be to the benefit of the profession of which he was the head. He had the acumen to see that to set up a claim to exclusive property in spoken words would be attended with legal and moral difficulty. His personal appreciation of his own position was not over-modest at any time, and he must have felt that *his* surgical classes would always remain well attended though the heavens should fall. Therefore, for liberal reasons he would be inclined to approve of the publication of his lectures while for private reasons he would be indifferent. But for professional reasons he would at that time be bound to object. The hebdomadal appearance of his name in capital letters in a print which frankly contained some non-medical matter, though its circulation was among medical men, came as a recurring shock to his ideas of professional decency, and on this point, and the further one that his weekly lectures in THE LANCET were daily quoted in the lay press, he based his objection. And not quite his only objection; for, as will be seen by the concluding words of the speech to his class of which we have already quoted the opening sentences, and in which he is dealing with the propriety of the publication by THE LANCET of reports of operations at the metropolitan hospitals, he was uncertain whether his extemporary addresses, naturally couched in familiar style, would have a literary merit commensurate with their scientific importance. With these small reservations Sir Astley Cooper may be said to have approved of Wakley's revolutionary departure. He certainly did not, as the smaller fry did, scream out "robber" and "thief":—

"Having said thus much respecting the lectures, I now deem it prudent, while I am on the subject, to state my opinion to you with regard to the publication of operations; this practice, I candidly confess, appears to me to be fraught with great danger, and will, I suspect, prove destructive to the reputation of the rising generation of surgeons. Suppose a very young surgeon had performed the operation lately executed by myself in the other hospital, and that it had terminated in death; suppose a young surgeon to be unfortunate for five or six operations in succession; would not the public, with one accord, exclaim, 'Good God! what a butcher that man is'? Such I fear would be the general feeling, and the ruin, the absolute ruin, of the operator, the unavoidable consequence. We must, I believe, hold a meeting of the surgeons for the purpose of adopting some measure by which, if possible, the system may be prevented. It is a practice to which I am opposed, and I will put it to the candour of any man, and ask if it be not calculated to produce much mischief? Believing this myself, it is a practice to which I much object. With regard to my lectures the case is different; I have a duty to perform in this theatre, and I have no objection for the whole world to be made acquainted with the manner in which it is discharged. I will here remark, however, that, in consequence of the colloquial style in which my lectures are delivered, they are not in that respect calculated for publication."

The arrangement mentioned by Sir Astley Cooper in his speech to his pupils under which he withdrew objection to the publication of his lectures if Wakley would, on his side, guarantee to suppress the author's name came into force in the tenth number of THE LANCET under somewhat droll circumstances and was loyally kept on either side. The name of the Editor of THE LANCET was not at first known. "Secrecy of design when combined with rapidity of execution," wrote that eccentric divine, the Rev. Charles Caleb Cotton, "like the column that guided Israel in the desert, becomes the guardian pillar of light and fire to our friends and a cloud of overwhelming and impenetrable darkness to our enemies." The secrecy with which THE LANCET had been planned and the suddenness with which it was placed before the public no doubt disconcerted the persons who would naturally be its foes. They had no time to organise either a counter-attack or a defence, nor did they know against whom to proceed. But a secret that was necessarily in the keeping of many persons did not long merit the description of impenetrable darkness, and within a few weeks it was circumstantially stated that Wakley was the enterprising editor. Other epithets were added according to the views of the speakers and their positions in the profession, but the quality of enterprise was never denied. At length it reached Sir Astley Cooper's ears that it was his old pupil at the school of the United Hospitals, Thomas Wakley, who was responsible for the unauthorised publication of the surgical lectures to the students at St. Thomas's Hospital, and the great man went personally to Norfolk-street to confer with the young editor. He obtained admission in the character of a patient, and caught Wakley, who at the time believed his secret to be inviolate, in the act of correcting a proof of one of the lectures in question, for, as has been already said, Wakley used his private house for his editorial purposes, the office a few yards away in the Strand being merely a place where communications were received and whence the business of publication took place. Never did a small check serve a man to better purpose than did Sir Astley Cooper's little "score"—there is no other word—serve Wakley. The great baronet was so pleased at the success of the rather transparent ruse that had gained him entrance and at the sight of Wakley's obvious discomfiture when he found his anonymity gone that any wrath he might have been cherishing was dissolved in hearty laughter. Friendly relations had previously existed between pupil and teacher and they were at once reassumed. With complete amicability the lecturer stated his views and the editor stated his. These latter could not have been otherwise than flattering to Sir Astley Cooper's pride, for Wakley's chief argument was that the publication of

the lectures must be for the undoubted good of mankind. A compromise was speedily made to the effect already stated by Sir Astley Cooper. If Wakley would suppress the author's name no formal objection would be taken to the publication of the lectures. The agreement was loyally kept. In accordance with it the fifteenth and ensuing lectures of Sir Astley Cooper were issued without the author's name; and when proceedings were afterwards instituted by Abernethy, supported by other lecturers in a similar plight, to obtain an injunction against the publisher and printers of THE LANCET on the plea that the author's copyright in his lectures was infringed by their publication Sir Astley Cooper took no part in the quarrel.

(To be continued.)

EXPERIMENTAL RESEARCHES OF THE ROYAL COMMISSION ON TUBERCULOSIS.

I.—MEAT.

THE risk to human health from the consumption of meat and milk from tuberculous animals has been variously estimated. The subject attracted little attention until the infective nature of tuberculosis was realised and the extensive prevalence of the disease among cattle came to be understood. As regards meat, with which the present article is concerned, a view has been held within recent years that the presence in the body of a food animal of any lesion of tuberculosis, no matter how small in extent or chronic in character, is evidence that its meat is a danger to health and that no part of its carcase should be used as human food. This view, which found support in the early experiments of Gerlach in 1875 and Toussaint in 1880, received a general acceptance at the first and second Congress on Tuberculosis; and in 1891, at Paris, a resolution of the congress recommended the exclusion from sale of all meat coming from an animal affected in any degree by tuberculosis. The resolution of the Paris Congress has, however, been nowhere put into practice, and both in France and elsewhere authorities seem now agreed that its requirements were excessive. Nocard, in his recent work "Les Tuberculoses Animales," states his belief that the risk to man from meat even of cattle with advanced tuberculosis is nowise great; and a recent writer, Leclanche, goes further and expresses doubts of the existence of any risk at all. The experimental evidence upon which these different opinions have been based are, however, surprisingly small. Gerlach's original experiments (which in the absence of antiseptic precautions are open to question) and those of Nocard, Bang, Galtier, and Kastner are the chief; but no one of these observers has made any large or comprehensive series of investigations, and their results are conflicting—indeed, owing to the different methods pursued they are hardly comparable one with another. They do not afford us a clear understanding on the point of greatest interest to public medicine—namely, whether the meat from a tuberculous animal is or may be harmful, and if so what circumstances and conditions of tuberculosis in the animal give its flesh the harmful quality. The conclusions upon this question arrived at by the Royal Commission on Tuberculosis were published in their report of last year,[1] and, tardily enough, the evidence on which the report was based is now issued.[2] As might be expected, the evidence obtainable from witnesses, which forms the first part of the volume, only tells us of probabilities and adds little to the store of facts bearing on the case. The rest of the volume is mainly occupied with the records of experimental inquiries made for the Commission by Dr. Sidney Martin and by Dr. Sims Woodhead.

Dr. Martin records his numerous experiments in feeding and inoculating test animals with meat from cattle in different stages of tuberculosis. The first part of his inquiry contains a detailed description of the methods of keeping the test animals (guinea-pigs, rabbits, pigs, and a few calves) and the precautions observed to prevent accidental tuberculosis among them. Accidental tuberculosis could be guarded against in the rodents, but was more difficult to eliminate among the pigs, which in some cases were tuberculous when bought. The difficulty was met by purchasing litters of pigs and killing and examining certain pigs out of each litter to ensure its freedom from tuberculosis. In all, 203 guinea-pigs and eight rabbits were used as controls, being kept under the same conditions as the experimental animals, but not used for experiment. None of them developed tuberculosis. Five litters of pigs appeared to be free from tuberculosis when bought, and control pigs set apart from each of these litters remained free from the disease. Dr. Martin now describes the results of introducing manifestly tuberculous matter into these test animals, and details the post-mortem appearances in each species according as the matter has been introduced by subcutaneous inoculation, by intra-peritoneal injection, or by feeding. He points to the distinction between the tuberculosis produced by feeding in rodents, which is manifested largely by intestinal lesions, and tuberculosis similarly produced in pigs, where intestinal lesions are frequently absent altogether.

"The chief points to be noticed in these results—i.e., in the pig—as they bear on tuberculosis in the human being, is that by feeding with tuberculous material there may be no lesion in the alimentary tract; that there may be absorption only through the pharynx and tonsil, producing tuberculosis of the connected lymph gland, so that the condition of things exactly tallies with the 'strumous' glands of children and young adults; lastly, from feeding, there may be affection of the lymphatic glands alone, as in the fourth animal, and of an organ as widely separated from the seat of infection as the epididymis of one testicle."

The second part of this inquiry deals with the effect of feeding or inoculating other test animals with meat of twenty-one cows in different stages of tuberculosis. The carcases were "dressed" in the ordinary way by the butcher or after the butcher's fashion, and convenient pieces of meat were then removed with a sterilised knife, the pieces being in some instances further "trimmed" by removing a layer about one-eighth of an inch thick from the cut surfaces. The meat was then minced or in some cases used to supply meat-juice, always with precautions against accidental contamination. Throughout the experiments muscle substance only was employed; fat, tendons, and lymph glands in the intermuscular spaces were removed and no obvious tuberculous mass was allowed to remain. The minced meat was given to rodents with their ordinary food previously sterilised. Pigs were fed with the meat only. Inoculations with meat and meat-juice were performed on other rodents. Eight of the twenty-one cows are classified as showing "mild," eight "moderate," and five "advanced and generalised" tuberculosis. Dr. Martin admits that such a classification is by no means an exact one; in a particular animal tuberculosis apparently "mild" may be in an active stage of generalisation, and its meat on that account may be possibly more infectious than that from an animal with more extensive but less active tuberculosis. For practical purposes, however, "mild" cases comprise those with tubercle of organs and glands almost wholly contained in one body cavity; "moderate" comprise tubercle of organs and glands in both pleural and peritoneal cavities, but without signs of extensive generalisation; while the "advanced and generalised" class comprises all more extensively diseased, including most animals in which lumbar and pelvic glands were affected and all which had tubercle in kidney or udder. Meat from each of the twenty-one carcases, with two exceptions, showed no tubercles or tubercle bacilli in the specimens examined. A single tubercle was found in the meat of each of two cows with "moderate" tuberculosis, both of which had been injected with tuberculin previously to slaughter. The results of the feeding and inoculation experiments with the meat are given in full detail. Space only permits us to give the summary in Section 81:—

"A. ..... Of 48 animals inoculated with meat or meat-juice 10 developed tuberculosis; of 102 animals (guinea-pigs, rabbits, pigs) fed with the meat 6 developed tuberculosis. These positive results were obtained from the meat of 8 of the cows—viz., of 1 cow with mild, of 3 with moderate, and of 4 with advanced and generalised tuberculosis.

"B. If the cases of advanced and generalised tuberculosis are excluded from consideration, it is seen that in experiments with the meat of 16 cows, the subjects of a mild or moderate degree of tuberculosis, the following results were obtained: of 35 animals inoculated with the meat or meat-juice 5 developed tuberculosis, and of 81 animals fed with the meat not one showed any sign of the disease.

"C. With the meat or meat-juice of 4 cows the subjects of generalised tuberculosis 13 animals were inoculated, 5 developing tuberculosis; with the meat of 4 cows 21 animals were fed, 6 developing tuberculosis."

[1] THE LANCET, April 27th, 1895.

[2] Report of the Royal Commission on Tuberculosis, Parts II. and III. London: Eyre and Spottiswoode.

Many noteworthy points were brought out by these experiments. In the first place, the meat of no one carcase was so infective as to produce tuberculosis in all the animals which received it by inoculation and still less in all the animals fed with it. Some animals responded to the test of inoculation with juice from meat of a particular carcase, while the same meat produced no effect when given as food to other animals. In a few cases, on the other hand, feeding with meat produced tuberculosis, while inoculations with the same meat were without effect. Further, where tuberculosis was produced in experimental animals its characters varied greatly; in some the course of the disease was as rapid and generalised as in animals of the same species treated in the same way with manifestly tuberculous matter. In others the disease, whether produced by inoculation or by feeding, ran a chronic course and the lesions were found distinctly localised post mortem. Some guinea-pigs injected with a particular meat-juice in both groins developed chronic tuberculosis on one side, while the other side remained unaffected. Yet the meat-juice which had given such a limited tuberculosis in one guinea-pig produced an acute generalised tuberculosis in another treated in the same way. Broadly speaking, the infectivity of the meat of each cow was shown to be greater as the degree of its tuberculosis had been greater, but Dr. Martin lays great stress on this great irregularity of the results obtained. The irregularity was hardly to be explained by assuming variations in the number of tubercles or of tubercle bacilli in the meat substance itself, for neither tubercles nor bacilli could be demonstrated in the substance of the meat which proved infective. Dr. Martin advances a consideration, however, which explains some of the anomalies he met with. The butcher, in preparing the meat for sale, uses the knife with which he has already incised the tuberculous lesions present, and his cloth also must needs be contaminated with tuberculous matter. By these means tuberculous material becomes smeared over the surface of the meat, and when so smeared will be irregularly distributed over the carcase, while the amount of contamination thus produced in the carcase of a particular animal will be roughly proportional to the extent of the tuberculosis of that animal. Irregular results such as Dr. Martin had obtained thus admitted of explanation when smearing was taken into account, and he shows grounds for believing that contamination by smearing is a common, if not the most frequent, way in which meat from tuberculous animals acquires its infective property. The Commissioners accepted Dr. Martin's view of the contamination of actual meat substance by the knives and cloths of the butcher, but point out, in Section 47 of their report, that to have demonstrated this extrinsic way of rendering meat dangerous was to destroy the evidence that might otherwise have been obtained respecting the wholesomeness or unwholesomeness of the proper meat substance towards test animals. It will be noted that by removing fat and all intermuscular substance from the meat used in his experiments Dr. Martin had removed parts not unlikely to contain minute tubercles or tuberculous lymph glands, and which, especially in an animal the subject of generalised tuberculosis, may not infrequently render meat infective.

Dr. Martin concludes Part II. of the inquiry by formulating certain rules for the condemnation, or otherwise, of carcases of tuberculous animals. These rules assume an acquaintance with the distribution of tubercle in the animal at the time of slaughter, and assume that proper precautions are taken in dressing the carcase, conditions obtainable only in a public abattoir under skilled supervision. After showing that there is no question that advanced and generalised tuberculosis in cattle should ensure condemnation of the whole carcase, he points to the difficulties as regards "mild" and "moderate" cases of the disease. Taking into account both the danger of smearing and the amount of generalisation in each case he would condemn—

"Animals in which tuberculosis of the thoracic organs was associated with disease of the abdominal organs, or in which tuberculosis of the abdominal organs was associated with disease of the lungs and thoracic glands.

"Similarly, all animals with tuberculosis of the lumbar or popliteal glands or of the kidneys would be condemned, since these lesions are a sign of the generalisation of the disease.

"Cases only of tuberculosis limited to one body cavity ought to be passed—e.g., those in which the pleura, lungs, or thoracic glands alone, or those in which the intestines, mesenteric glands, and udder alone are affected."

Before passing such carcases Dr. Martin would require the complete removal of any obvious tuberculous mass. This can only be done in the case of "grapes" on the parietal pleura by stripping the pleura, and such a proceeding, it is stated, should ensure the condemnation of the carcase as damaged, if not as dangerous. Apart from such cases the above rules would have passed twelve and condemned nine of the twenty-one carcases experimented on. Dr. Martin's inquiry contains many matters of interest besides those already indicated. His observations on the difference in virulence of tuberculous material obtained from different sources, upon the production of "bacterial necrosis" apart from tubercle in guinea-pigs, and upon the pathology of tuberculosis in different animals are particularly worth studying.

Dr. Woodhead's inquiry deals with the power of cooking to destroy tuberculous matter in meat. His experiments on the temperature of joints under different conditions of cooking will be of much value to all interested in the thermometry of cooking processes. Besides determinations of this sort he submitted to experiment meat to which demonstrably infective tuberculous matter had been added in various ways so as to imitate, as far as possible, meat smeared with tuberculous matter in process of dressing or containing tubercle in its deeper parts. This "artificially tuberculous" meat was cooked in different ways, record kept of the maximum temperature reached at different depths, and portions taken to feed and inoculate test animals. Dr. Woodhead concludes that no cooking process can be relied upon to destroy the infectivity of tubercle bacilli in any but the parts near the surface. Even the danger of meat smeared with tuberculous matter is not wholly prevented by cooking, for strips of meat so smeared are likely to be made into "rolls of beef" by the butcher, and Dr. Woodhead's experiments leave no doubt of the infectivity of the interior of such rolls after cooking. He also indicates that rolls are habitually made up from parts of the carcase most liable to contain tuberculous serous membranes and glands.

THE OBJECTS AND AIMS OF THE CIVIL RIGHTS DEFENCE COMMITTEE.

THE primary purpose for which the Civil Rights Defence Committee was formed was to assist Mr. R. B. Anderson to appeal to the Privy Council for the reversal of those illegal judgments and orders of colonial judges which were emphatically condemned by Royal Commissioners as "judicial persecution" and a "public danger." These judgments and orders remain in force, controlling Mr. Anderson's personal liberty and preventing him from returning to Tobago to carry on his practice, collect his debts, dispose of his property, or in any way satisfactorily to settle his affairs. To vindicate his rights and to obtain personal redress Mr. Anderson brought an action in the High Court of Justice in England. This action—Anderson *v.* Gorrie and others—came on for trial in April, 1894, before the late Lord Chief Justice Coleridge and a Middlesex special jury. One of the defendants, Sir John Gorrie, Chief Justice, died before the trial. Mr. Justice Lamb gained a verdict on the ground that he had not acted maliciously; whilst against Mr. Justice Cook, the remaining defendant, after a seven days' trial, conducted with remarkable ability and tenacity by Mr. Anderson in person, he obtained the following memorable verdict:—"The jury find that the defendant Cook oppressively and with malice overstrained his judicial powers to the prejudice of the plaintiff and the wilful perversion of justice," and found a verdict for the plaintiff for £500. On this verdict being given, on May 4th, 1894, Lord Coleridge entered judgment for the defendant, on the ground that the action did not lie against a judge. This decision has been affirmed by the Court of Appeal, although Mr. Anderson has challenged the competency of the court to decide the question, because at the time Lord Esher sat and pronounced judgment an action of a similar character—viz., Yeatman *v.* Soden, Young, Parfitt, and Lord Esher—was then depending against him, and because the judgment Lord Esher pronounced against Mr. Anderson became a precedent which Lord Justices Lindley and A. L. Smith actually used on Nov. 9th, 1894, to quash the action for slander against Lord Esher. This, Mr. Anderson contends, is tantamount to Lord Esher sitting and pronouncing judgment in his own case. Efforts made by Mr. Anderson to have the Appeal Court differently constituted to hear his case have failed, as might have

been anticipated, and Mr. Anderson is seriously hampered in his efforts to carry his case to the House of Lords by a further decision of the judges not to furnish him with the orders of the court made in his case which are technically necessary for prosecuting his appeal. It is this contemplated appeal to the House of Lords which constitutes the second immediate object of the Civil Rights Defence Committee. The appeal is necessary for two purposes—viz., first, to secure to Mr. Anderson if possible the fruits of the triumphant verdict gained by him in the action Anderson *v.* Gorrie and Others, and, secondly, to ascertain authoritatively the state of the law in reference to the doctrine of judicial immunity which, since Lord Coleridge set aside the verdict referred to on the ground that the action did not lie against a judge, has been carried to an extreme limit. The importance of the appeal to the House of Lords cannot be over-estimated on public grounds. The Civil Rights Defence Committee is advised that the judgment of the Appeal Court in Mr. Anderson's case is a formal declaration that for acts, however illegal, in direct violation of Magna Charta and the Bill of Rights, depriving the subject of his right to earn his living by his calling or profession, and of his lawful charges for work and services, inflicting penal damages upon him for the proper exercise of his calling or profession, and maliciously and contrary to Magna Charta and the Bill of Rights enforcing these illegal judgments by illegal imprisonment, by the imposition of excessive bail, which Lord Coleridge called "unmitigated unlawful tyranny," and by every species of oppression, including malicious criminal prosecution for petitioning the Sovereign, the subject has no right of remedy whatever. The committee is also advised that there is no precedent for such a judgment. If, however, contrary to the advice obtained and the expectations of the committee, the House of Lords should decide that the Court of Appeal has correctly interpreted the law, then it will become necessary for the committee to endeavour to obtain in some other way redress for Mr. Anderson, who has so long and so courageously maintained an unequal contest in defence of rights common to himself, the profession, and every British subject, and in the interest of the rights and liberties of the individual, to devise some remedy against the infliction of similar injuries in the future through the perversion of judicial processes, which were intended to secure the impartial administration of justice between man and man, and which it is now maintained can be perverted maliciously by judges with impunity. With these objects in view, and in order to strengthen the committee in its arduous struggle, a conference was held between a deputation of the committee and several members of Parliament at the House of Commons on Aug. 29th, 1895, when Mr. Cohen, M.P., expressed the opinion that a judge ought to occupy a position of impregnable immunity for any action which he commits in his judicial capacity, but that he ought to be less instead of more protected in case he ever should allow himself to overstep the bounds, make them as wide as they can be made, of judicial action and judicial procedure. The general issue of the conference was so encouraging that the committee has drawn up a form of memorial from constituents to members of Parliament asking them to give their attention to the reports of the Civil Rights Defence Committee and to afford to the committee their personal coöperation both in and outside Parliament. These memorials are being widely circulated and signed and will no doubt exercise a most favourable influence upon the fortunes of the cause. It is recognised by the committee that the success of their efforts depends upon the creation of an overwhelming body of public opinion in favour of the principles which they are engaged in advocating. Personal redress for Mr. Anderson, the preservation of the ancient rights and liberties of Englishmen, the adequate protection of the subject against malicious and illegal injuries inflicted by judges outside their jurisdiction, and security for the privileges conferred by their diplomas on medical practitioners generally can only be achieved by obtaining the widest publicity for the facts of Mr. Anderson's case. It will then be seen that the principles involved are those in which every medical man and every person in the kingdom has an interest. The present mode of administration of the law is uncertain and unsatisfactory, and the uncertainty of the law compels great numbers of people to submit to injuries inflicted rather than face the certainty of loss and the probability of contumely which await those who in the pursuit of their just rights have recourse to the regular tribunals. When law is administered, not as it is, but according to the discretion or indiscretion and caprice of the judge, when appeals are attended by unnecessary vexation and delay it is no wonder that citizens shrink from seeking what they cannot find, justice at the hands of the law, but resort, wherever it is possible, to extra-judicial channels and tribunals of arbitration. To remedy this state of things the Civil Rights Defence Committee is appealing to public men and public bodies generally, striving to enlist their coöperation in the defence of the civil rights of British subjects all over the world against the dangerous encroachment of the doctrine of judicial discretion, irresponsibility, and immunity even for the commission of acts expressly prohibited by statute law.

THE MEDICAL DEFENCE UNION, LIMITED.

THE ordinary general meeting of the Medical Defence Union, Limited, was held at the rooms of the Royal Medical and Chirurgical Society, 20, Hanover-square, London, W., on Feb. 21st, the business being to receive the annual report of the Council and statement of accounts for the past year, to elect three members to the Council, and to transact other business.

The report states that the work of the Union has again exceeded that of any previous year. The number of applications from members for advice and assistance made to the Council is greater than before. The Council has been fortunate enough during the past year to have escaped taking many cases into court, with the result that, although a large amount of legal work has been successfully carried through, it has been at the cost of persons outside the Union. Libel actions have been brought against members, and the Union, on behalf of members, has brought similar actions against those outside the profession, and in each case the action has terminated by the costs being paid by the "other side" without trial, and suitable and satisfactory public apologies and retractions have been obtained. There can hardly be a doubt that such a satisfactory result would not have been obtained if the member aggrieved or attacked had brought or defended the action in his individual capacity; the mere fact that the Union was acting for the person injured certainly influenced the result. At the early part of the year Dr. Granville Bantock, the honorary treasurer, tendered his resignation. Dr. J. A. Masters, formerly one of the honorary secretaries, was elected in his stead, and Dr. Campbell Pope was appointed to fill the vacant position as honorary secretary. During the year it became evident that the time had arrived when a paid general secretary should be appointed and required to give all necessary time to the duties of his office, and Dr. A. G. Bateman was duly appointed. Over 1000 applications had been received during 1895 from members for aid, advice, and assistance.

Mr. VICTOR HORSLEY, the President, in submitting the report, said that increase of membership had necessarily entailed an increase of work which, however, had been carried out with singular success. In commenting on the legal work that had been accomplished during the year he referred to the help that the Council had received from the tact and sound judgment of Mr. Hempson, the Solicitor. The financial report showed that at the end of the year 1895 there were no liabilities and a large balance in hand, and although the work of the Union had greatly increased the expenses had greatly decreased, the chief factor being the diminution in the law expenses. He asked those who thought defence work costly and financially a dangerous work to undertake to compare the position of the Union three years ago with its present standing. Fresh members were wanted and each member of the Union should induce two or three new members to join. The working expenses of a staff necessary for 4000 members would not be greater than that required for 2000. While speaking of the staff he would like to congratulate Dr. A. G. Bateman on the energy and success with which he carried out their business. With regard to the question of the British Medical Association subsidising the Union for the purpose of prosecuting quacks the Council of that Association had decided adversely to the proposal. He was in favour of the resolution passed at the last annual meeting of the British Medical Association that the Association should take

steps for the purpose of taking up medical defence, because it approached nearer to the ideal that the whole of the profession should defend each of its members. If the scheme were carried out the British Medical Association would practically absorb the Medical Defence Union. That would be a very happy kind of despatch, because with very few exceptions the members of the Medical Defence Union were members of the British Medical Association. Members of the Medical Defence Union very often forgot that they, a few thousand members of the profession, were actually doing the work of the profession itself. That was not recognised by the medical press or by the profession itself to any large extent. He then gave a brief history of the proceedings taken with regard to the amalgamation of the Medical Defence Union with the London and Counties Medical Protection Society. A committee of that society was now sitting to decide the only point of difference remaining between the two societies—namely, as to the name of the amalgamated bodies.

Mr. STAMFORD FELCE, who seconded the adoption of the report, remarked that the name of the Medical Defence Union was not only a power in the land, as stated by Dr. Bridgwater at their last annual meeting, but was really a name to conjure with. He thought it very desirable that the name of the Medical Defence Union should be retained.

Dr. W. COLLIER asked that some discussion might take place with regard to the question of the work of the Union being undertaken by the British Medical Association.

Mr. E. BERDOE objected to amalgamation with the British Medical Association. The work could not be well done by a great scientific body like the Association. He was afraid that a number of persons now members of the Medical Defence Union would not be inclined to join the British Medical Association. His friend, Mr. George Brown, had told him that about two-thirds of the members of the Union were members of the British Medical Association. He wished to know what was to be done with the non-members of the British Medical Association.

Other speakers took part in the discussion, and the report was then adopted.

The retiring members of the Council—Mr. Victor Horsley, Mr. Stamford Felce, and Dr. Granville Bantock—were re-elected and the auditors appointed for the ensuing year.

Mr. E. BERDOE then moved a resolution (which was eventually withdrawn) for the purpose of provoking a discussion on the desirability of merging the identity of the Union with the British Medical Association.

Mr. KEELE thought they had far better remain separate from the British Medical Association. He was not a member of that body and he did not intend to become one.

Mr. HORSLEY explained that the Council of the British Medical Association at the present moment could give no decision, because the committee which had been appointed to inquire into the matter would not report till the meeting of the Association at Carlisle.

Dr. WALTER SMITH was strongly in favour of the movement, but he thought that the present meeting should not come to any decision in the matter as it had not been put down on the agenda.

Mr. STAMFORD FELCE thought that if all members of the Union were members of the Association the work would be done better.

Mr. GEORGE BROWN was agreeable to the Association taking up the work of the Union if he could be quite sure that the work would be done as well as it was being done now. He was not particularly confident that the Association would be the very best body to take up the work.

Dr. CARTWRIGHT thought the discussion futile because they had no definite proposition before them.

Dr. COLLIER thought a larger body of the profession would do the work better than a small body.

Mr. W. J. C. NOURSE said the British Medical Association did not represent the medical profession in the United Kingdom. It was a very large body, but there were a great many medical men of standing who, for some reason or other, preferred not to belong to it, and there were others unable to belong to it. Personally he would much prefer to trust his interests to the Medical Defence Union than to a committee of a large body like the British Medical Association.

After some remarks from Dr. W. S. A. GRIFFITH and Mr. E. C. BOUSFIELD,

Dr. CAMPBELL POPE said the main point to keep before the mind was that the work of medical defence was understood by but few. It was a business that had to be learned.

Mr. A. MARMADUKE SHEILD said the British Medical Association was not, as they knew, uniformly popular with everyone. Some of the leading men of the profession would have nothing to do with the British Medical Association, but he thought there was no sane man who would refuse to join the Medical Defence Union. It was possible that in the future the Medical Defence Union might become a more important body than the British Medical Association.

After some remarks from Dr. BARNES the meeting terminated, Mr. HORSLEY having left the chair before a vote of thanks could be accorded to him.

THE LONG TRANCE AT THE ROYAL AQUARIUM.

As will be seen in another part of our present issue Mr. Josiah Ritchie, the Chairman and Managing Director of the Royal Aquarium has sent us a letter of protest in reference to an annotation entitled "To the Degradation of the Spectator." To this we gladly give publicity, but we are still of opinion that "it is in truth, high time that such public exhibitions were stopped; to science they are of no purpose, to the subject they are dangerous, and to the public they are demoralising. It is indeed a pity that any medical man should so far lose his self-respect as to encourage them." That our readers might gather some idea of the "show" for which some possessed of morbid minds apparently paid a guinea to witness—this being the highest price for a stall—we sent a representative to the Royal Aquarium on the occasion of the awakening of the man referred to in our annotation of the 15th inst. In spite of our acknowledged hostility to such exhibitions Mr. Ritchie courteously allotted our representative a seat in the stalls, and the following is a report of the proceedings as it presented itself to his eyes. From the position it was, of course, impossible to note the changing states of the subject—such as the change from abdominal to thoracic breathing—very minutely, but the following report will give a good idea of the "performance."

The thirty days' trance ended on Thursday, Feb. 20th, at 10.30 P.M., and shortly before this time a large box resting on four legs was brought in and placed in an inclined position before the audience, one end resting on the stage and the other on the partition separating the orchestra from the stalls. On a light covering being removed from the top of the box the subject was presented to view, and except for the slight colour of the face had the appearance of a corpse reposing in a coffin. Another subject was brought in who was in a short trance only and then "Professor" Fricker, addressing the audience, said Mr. Johnstone was put into a trance on Jan. 21st and had remained in the trance-room ever since. The trance was produced by hypnotism, a development of mesmerism and in its deepest stage. He would not undertake to put everybody into a trance, but he thought it probable he would be able to put three persons out of four into a deep state. The temperature of Johnstone had averaged 97·2° and the pulse about 50. The lowest temperature was 96·4° and the highest 98·8°. The genuineness of the trance had been authenticated by the man being watched day and night and also by his subjection to various tests, such as the static spark and a needle thrust under the nail. A penknife had been run through the hand and a vein perforated and the bleeding stopped. Slight twitches had been occasionally seen. Mr. Fricker explained that his motive was to show the harmlessness of a long trance. The man would wake up in good health. During the thirty days he had lost about 10 lb., but the opinion of medical men who had examined him was that he was none the worse for the trance. There was no dreaming, and such trances were beneficial to people suffering from overwork either mental or physical. The man had been a soldier and he had not been in the habit of going into trances. Mr. Fricker had met the man in May last, and he had put him into one or two short trances of a few hours and one of several days. He had not, however, been hypnotised since June last.

A gentleman in the audience here rose and said he was prepared to swear on oath that Mr. Johnstone on being put on to the stage had opened his eyes and rapidly closed them. A lady also corroborated his statement.

Mr. Fricker said from his experience it was utterly impossible for a man in Mr. Johnstone's state to open his eyes.

Amidst some confusion voices called to know whether there were any medical men present. A gentleman rose on the platform and took off his hat, but declined to answer for some time to questions of "Name." Eventually he gave his name, but he did not give either his Christian name or address. On this being insisted upon by the gentleman who said he saw the subject open his eyes, cards were exchanged.

A needle was thrust under the thumb nail and through the arm of the short-trance man, and he was afterwards quickly awakened. He rubbed his eyes and presented the appearance of a man who had just recovered from a deep slumber.

Mr. Fricker then turned his attention to Mr. Johnstone. A needle was thrust under the nail of the thumb, and the medical man was asked whether he thought the test sufficient. He replied in the affirmative, and said he thought the present case a very good and typical example of hypnotism. There was nothing marvellous in it

except that the trance had been so prolonged. The interest would be to see what happened when he awoke.

Mr. Fricker explained that the man had been fed on sterilised milk, and recently he had had a little of Liebig's beef peptone, which he thought had been beneficial, as there had been less loss of weight. The process of awakening then commenced. Mr. Fricker first manipulated the subject's fingers, then gently shook the limbs with upward passes, afterwards making the usual passes over the face. At the expiration of three minutes and a half the man showed some signs of returning animation, and a few seconds later he moved his head slightly. [Here Mr. Fricker said several hypnotists had tried to arouse the subject, but had failed after in some cases half-an-hour's trial. On being asked what would have happened if from any cause he (Mr. Fricker) had been unable to have fulfilled his task, he said he had suggested to the subject before going to sleep that he was to awake in about forty days. It had been proved that such a suggestion made to a subject before going to sleep would have an effect.] Seven minutes and three-quarters had now expired and a little milk was given to the subject. It was explained that he was not yet properly awake, and that a little brandy had been added to the milk. Mr. Fricker then asked the man, "How are you? What have you been doing all this time?" and the man then replied, "Where am I?" The further questions, "Are you hungry? When did you have a good meal last?" were then put. By this time exactly twelve minutes had elapsed. The subject replied, "I had a meal on the 19th January."

"Did you have anything on the 20th?"

"I had very little on the 20th."

In answer to further questions he only remembered going to sleep in the trance-room and nothing during the interval. He could not remember having had any dreams.

Mr. Johnstone, who seemed in a very dazed state, was propped up in the box and eventually placed upon a chair, but he was very weak and unable to stand even with assistance.

Before being carried off the stage it was explained that his pulse was regular and there appeared to be nothing the matter with him but weakness. Mr. Johnstone himself said he was giddy, weak, and stiff.

In this account there is nothing extraordinary, many similar cases of trance induced hypnotically being on record. The explanation of such trances depends upon the view we take of the general subject of hypnotism. Heidenhain's doctrine that hypnotic phenomena are due to inhibition of certain portions of the cortex of the brain seems the most probable view in the present state of our knowledge, but it leaves much unexplained. We shall require to make large advances in psychology and in our knowledge of the mutual relation of body and mind before any complete and satisfactory doctrine of hypnotism will be possible. In the meantime, we must express our strong disapprobation of these public experiments, for, as we have already said, they do not advance knowledge in any way, but simply minister to a curiosity that is not praiseworthy. Mr. Fricker's claim that this prolonged trance is likely to be beneficial to those overworked physically or mentally, strikes us as most unfounded. All the evidence at our disposal points to the conclusion that hypnotic experiments exhaust the individual who is the subject of them and leave him unfit for either physical or mental exertion. That such procedures should possess any therapeutic value seems in the highest degree improbable. Rest and recuperation can be obtained by much less questionable and perilous methods. The subject of these experiments on waking from his trance is described as being "in a very dazed state" and as "very weak and unable to stand even with assistance." Truly a somewhat unsatisfactory result of a measure intended to benefit those suffering from the effects of overwork.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6017 births and 4052 deaths were registered during the week ending Feb. 22nd. The annual rate of mortality in these towns, which had been 20·5 and 19·3 per 1000 in the two preceding weeks, rose again last week to 19·4. In London the rate was 20·0 per 1000, while it averaged 19·1 in the thirty-two provincial towns. The lowest rates in these towns were 12·7 in Burnley, 12·9 in Nottingham, 13·0 in Hull, 13·7 in Croydon, and 14·3 in Portsmouth; the highest rates were 22·9 in Brighton, 23·4 in Bolton, 23·8 in Preston, 24·6 in Liverpool, and 27·4 in Norwich. The 4052 deaths included 561 which were referred to the principal zymotic diseases, against 589 and 512 in the two preceding weeks; of these, 196 resulted from measles, 176 from whooping-cough, 83 from diphtheria, 44 from "fever" (principally enteric), 32 from scarlet fever, 30 from diarrhœa, and not one from small-pox. No fatal case of any of these diseases occurred in Preston; in the other towns they caused the lowest death-rates in Brighton, Swansea, Hull, and Bradford, and the highest rates in Birmingham, Leicester, Wolverhampton, Norwich, and Burnley. The greatest mortality from measles occurred in Croydon, London, Birmingham, Leicester, Norwich, and Burnley; and from whooping-cough in West Ham, Cardiff, Sheffield, Bolton, and Manchester. The mortality from scarlet fever and from "fever" showed no marked excess in any of these large towns. The 83 deaths from diphtheria included 43 in London, 4 in Liverpool, 3 in West Ham, 3 in Wolverhampton, 3 in Birmingham, and 3 in Burnley. No fatal case of small-pox was registered in any of the thirty-three towns. There were 58 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 22nd inst., against 74, 64, and 60 at the end of the three preceding weeks; 5 new cases were admitted during the week, against 12, 6, and 12 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2937, against 2879, 2883, and 2944 on the three preceding Saturdays; 234 new cases were admitted during the week, against 273, 285, and 303 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 446 and 402 in the three preceding weeks, further declined to 377 last week, and were 204 below the corrected average. The causes of 58, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Salford, Oldham, Leeds, Newcastle-upon-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·8 and 19·1 per 1000 in the two preceding weeks, further rose to 19·5 during the week ending Feb. 22nd, and was 0·4 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·7 in Leith and 16·4 in Paisley to 20·5 in Perth and 21·6 in Dundee. The 570 deaths in these towns included 32 which were referred to whooping-cough, 12 to diarrhœa, 6 to scarlet fever, 5 to "fever," 4 to measles, 1 to diphtheria, and not one to small-pox. In all, 60 deaths resulted from these principal zymotic diseases, against 77 and 66 in the two preceding weeks. These 60 deaths were equal to an annual rate of 2·1 per 1000, which was 0·6 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had declined from 37 to 30 in the three preceding weeks, rose again to 32 last week, of which 16 occurred in Glasgow, 5 in Aberdeen, 4 in Edinburgh, and 4 in Dundee. The 12 deaths referred to diarrhœa showed a slight further decline from those recorded in recent weeks, and included 4 in Glasgow and 3 in Dundee. The fatal cases of scarlet fever, which had been 10, 6, and 7 in the three preceding weeks, declined to 6 last week, of which 3 occurred in Edinburgh and 2 in Glasgow. The 5 deaths referred to different forms of "fever" corresponded with the number in the preceding week, and included 2 in Glasgow and 2 in Edinburgh. The fatal cases of measles, which had been 4 and 5 in the two preceding weeks, were 4 last week, of which 2 occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 106 and 105 in the two preceding weeks, rose to 120 last week, but were less than one-third of the very high number recorded in the corresponding week of last year. The causes of 35, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the four preceding weeks from 27·4 to 22·5 per 1000, further fell to 19·8 during the week ending Feb. 22nd, a lower rate than has been recorded in any week since August, 1894. During the past eight weeks of the current quarter the death-rate in the city has averaged 25·1 per 1000, the rate during the same period being 19·3 in London and 17·2 in Edinburgh. The 133 deaths registered in Dublin during the week under notice showed a decline of 18 from the number in the preceding week, and included 2 which were referred to

the principal zymotic diseases, against 7, 10, and 8 in the three preceding weeks; of these, 1 resulted from scarlet fever and 1 from enteric fever, while no death was attributed either to small-pox, measles, diphtheria, whooping-cough, or diarrhœa. These 2 deaths were equal to an annual rate of only 0·3 per 1000, the zymotic death-rate during the same period being 3·4 in London and 2·3 in Edinburgh. So low a zymotic rate has not been recorded in Dublin in any week since July, 1894. The 133 deaths registered in Dublin last week included 23 of infants under one year of age, and 40 of persons aged upwards of sixty years; the deaths of infants corresponded with the number recorded in the preceding week, while those of elderly persons showed a slight decline. Four inquest cases and 4 deaths from violence were registered; and 46, or more than a third, of the deaths occurred in public institutions. The causes of 6, or nearly 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

MOST of the medical officers of the Ashanti Expeditionary Force have arrived, or will have arrived within the next few days. Amongst them are Surgeon-Colonel Taylor, Brigade-Surgeon-Lieutenant-Colonel Townsend, Surgeon-Lieutenant-Colonel Blennerhasset, Surgeon-Majors Beatty and Dodd, and Surgeon-Captains Corcoran, Burke, and Maher. Surgeon-Major Wilson remains on the West Coast of Africa to undertake a tour of service. Surgeon-Captain Beveridge has been posted to the Western District, Surgeon-Captain Borrodaile to Colchester, and Surgeon-Captain Hale to the Thames District. Surgeon-Majors Geoghegan and Woods and Surgeon-Captain Kelly have arrived from India, and Surgeon-Lieutenant St. John Killery has embarked for Madras.

ARMY MEDICAL STAFF.

Surgeon-Captain William H. Bean is placed on temporary half pay on account of ill-health.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Staff-Surgeons: S. T. O'Grady to the *Grafton*; C. E. Geoghegan to the *Collingwood*; and Thomas E. H. Williams to the *Defiance*. Surgeons: John E. H. Phillips to the *Boscawen* for the *Seaflower*; Sidney T. Reid to the *St. Vincent* for the *Martin*; Paul H. M. Star to the *Impregnable* for the *Nautilus*; Arthur A. Bankart to the *Impregnable* for the *Pilot*; Patrick W. MacVean, M.B., to the *Lion* for the *Liberty*; John F. Hall, M.B., to the *Caledonia* for the *Sealark* (all lent during the training season); Cecil H. Rock to the *Spider*; H. W. G. Green and T. W. Philip to the *Imperieuse*; R. L. Price to the *Northampton*; J. H. Stenhouse to the *Grafton*; L. Bidwell to the *Collingwood*; W. Spry to the *St. Vincent*; and O. Rees and G. T. Collingwood to the *Pembroke*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant Eustace Maude Callender, 12th Middlesex Volunteer Rifle Corps, to be Surgeon-Lieutenant.

YEOMANRY CAVALRY.

Denbighshire (Hussars): Surgeon-Lieutenant R. Williams to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 1st Cheshire and Carnarvonshire: John Oldershaw, M.D., to be Surgeon-Lieutenant. 1st Berwickshire: William Douglas Forsyth, M.B., to be Surgeon-Lieutenant. *Rifle:* 2nd (the Weald of Kent) Volunteer Battalion the Buffs (East Kent Regiment): Peter Paget, gent., to be Surgeon-Lieutenant. 5th Volunteer Battalion the Cheshire Regiment: Surgeon-Major P. M. Davidson to be Surgeon-Lieutenant-Colonel, 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers: John Young, M.B., to be Surgeon-Lieutenant. 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment: Bonner Harris Mumby, M.D., to be Surgeon-Lieutenant. 1st (Renfrewshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders); Alexander Leitch, M.B., to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies: Alic Phillips, Gent., to be Surgeon-Lieutenant.

THE FRENCH ARMY MEDICAL SERVICE.

The regulations for admission to the French Military School of Medicine have lately undergone considerable alteration. In future all candidates will be called on to produce diplomas testifying to their proficiency in letters and philosophy (Baccalauréat de l'enseignement secondaire classique), together with certificates showing that they have successfully studied physics, chemistry, and the natural sciences, and likewise documentary evidence to the effect that they have taken out four of the sixteen "inscriptions" that are required for the doctorate of medicine. The special tests that have next to be surmounted are three in number. The first consists of a dissertation in French upon a philosophic subject, a composition on physiology and chemical biology, and a thesis in German about one page in length. In the second test each candidate has to answer two questions (drawn at random) in anatomy and histology, and in the third he is subjected to oral interrogation for a space of twenty minutes on elementary general medical and surgical pathology, and minor surgery. It will be seen that botany and zoology have vanished from the programme, besides European history &c. The marks allowed for each subject are as follows: philosophical dissertation, 5; physiological composition, 20; German theme, 4; anatomy and histology, 20; general medical and semeiological pathology, 10; and surgical pathology and minor surgery, 10. At the final examination an allowance of twenty marks is made to all candidates who are in possession of the full degree of "Bachelier ès Sciences," and a similar privilege is likewise granted to such as are acquainted with a foreign language other than German.

THE ITALIANS IN EAST AFRICA.

Notwithstanding that General Baratieri has a very large military force—amounting altogether, it is alleged, to 30,000 or 40,000 men—at his disposal, there can be no doubt that the Italian troops in Africa are in a rather critical situation and that it is causing some anxiety to the Italian Government. The recent blockage of the Suez Canal delayed the passage of reinforcements for the Italian garrison in Africa. The forces at the disposal of Menelek are represented as being very large, but it is believed that there is great difficulty in obtaining supplies for them. The Italian force has a large number of medical officers and hospital *matériel* in Africa and the expense of the expedition must be very considerable.

THE DIRECTION OF THE ARMY MEDICAL SERVICE.

Mr. Brodrick's recent statement in the House as to the successor to Sir William Mackinnon will not have escaped our readers' attention. It is understood that the appointment of a new Director-General for the Army Medical Service is being very carefully considered by the War Office and military authorities at the present time. As Mr. Brodrick promised that the decision of the Secretary of State for War would be announced as soon as one was arrived at, it is probable that we may not have very long to wait before the name of the officer selected for the post is made known.

THE RESULTS OF THE ASHANTI EXPEDITION.

There is every reason to hope and believe that the late expedition to Kumasi will be followed by excellent results. Samory, the chief of a powerful and warlike Mahommedan tribe, has sent a letter to Mr. Maxwell, the Governor of the Gold Coast, renewing his expressions of fidelity to the British, and the Ashanti country is apparently quite peaceful and settled to the satisfaction of the tribes in its neighbourhood, who are the allies of the British, and probably, in some degree, on that account have been so long subjected to the raids of the Ashantis.

ARMY RECRUITS.

THE report of the Inspector-General of Recruiting has just been laid upon the table of the House of Commons. According to the statement made by Mr. Brodrick in the House the number of special enlistments in 1895 of recruits under the standard and still growing was 5780, which is a large decrease as compared with the previous year. The report of the Inspector-General shows, moreover, that the great majority of these specially enlisted men attained the full standard within their first year of service.

YELLOW FEVER ON AN IRONCLAD.

Telegraphic despatches received in Paris through Reuter's agency announce that 150 cases of yellow fever have occurred on board the Italian ironclad cruiser *Lombardia*

at Rio de Janeiro, fifty of which have proved fatal. Assuming the reported outbreak of yellow fever to be true, it is, nevertheless, probable that the extent of the disease and the number of fatal cases that have occurred on board the *Lombardia* have been exaggerated, as we sincerely trust may prove to be the case.

A gratuity of five lakhs of rupees is, we are glad to say, being given to the troops engaged in the recent Chitral expedition. The unusually arduous character of their services and the discipline and spirit they displayed in the undertaking merit some special recognition. We sincerely trust that the admirable services of the native troops will not be forgotten.

Surgeon-Captain O'Callaghan, Adjutant of the Bearer Company which took part in the recent Ashanti expedition, was prostrated by fever when the troops evacuated Kumasi and was landed from the *Kabenda* at Las Palmas last Thursday suffering from dysentery, vomiting, and malarial cachexia. We are glad to learn that, though very weak, he is convalescing slowly.

Correspondence.

"Audi alteram partem."

"THE ADJUTANT-GENERAL AND THE ARMY MEDICAL SERVICES."

To the Editors of THE LANCET.

SIRS,—My attention has just been called to some comments in THE LANCET of Feb. 8th on the few remarks I made at Netley. The fault, no doubt, is due to my indifferent speaking, but as I particularly alluded to the fact that it was now recognised the medical department were entitled to their full share of the money voted for the field training of troops, and commended the advance the department had made in the field work of their bearer companies, it is hardly fair to impute to me the design of creating an impression that the duties of the department were merely pathological and surgical. As for the rest I fear that I am unrepentant. I do not admit a distinction between the expressions "doctor," as I used it, and "member of the Army Medical Staff."

I am, Sirs, yours faithfully,

Bruton-street, W., Feb. 21st, 1896. REDVERS BULLER.

"THE REGISTRATION OF MIDWIVES."

To the Editors of THE LANCET.

SIRS,—How far the "new woman" and the national tendencies of which that lady is the sign and symbol are to be held responsible for the strenuous efforts now being made to abrogate the Medical Acts, and to replace the time-honoured "Sairey Gamp" by a diplomatised and scientific type of midwife, it is difficult to say. The existence of such a tendency is, however, sufficiently demonstrated by the Midwives Registration Bills submitted to Parliament, to the General Medical Council, and to the branches of the British Medical Association, and while it is clearly the duty of the medical profession to safeguard and protect its legal rights and privileges, it may be a matter worthy of consideration whether there is at the bottom of the present midwifery agitation anything more substantial than a desire for the elevation and emancipation of the fair sex. The puerperal mortality, as shown by the Registrar-General's returns, which probably represent in this matter a good deal less than the truth, appears to be excessive. From 1871 to 1893 98,856 mothers died in England and Wales from puerperal fever and the accidents of childbirth, and in these days of antiseptic midwifery such a mortality must cause a good deal of searching of heart among state sanitarians. That a serious effort should be made to bring a little order out of the chaos at present prevailing on the midwifery question, and that the powers of the medical officer of health to deal with women engaged in nursing septic cases and with irregular and incompetent midwives should be largely increased, is, I think, a matter respecting which few members of our profession will be in doubt. With a view, therefore, of promoting these objects and also preserving intact the hard-earned legal privileges of our profession I have drawn up the following.

I am, Sirs, yours faithfully,

Salford, Feb. 24th, 1896. WILLIAM FRASER, D.S.Sc. Victoria.

Suggested Outline of an Act for the Prevention of Puerperal Fever.

1. The Act shall apply to every sanitary authority in England and Wales.
2. The definition of puerperal fever shall be any septic condition occurring during the parturient period (thirty-one days from birth) and connected therewith.
3. Every medical practitioner, on becoming aware that he is attending a case of puerperal fever, shall forthwith certify the fact to the medical officer of health for the district. The medical officer of health may call for a second certificate from the practitioner in attendance as to the exact nature and progress of the case, and for each certificate the practitioner shall receive from the sanitary authority the sum of 2*s.* 6*d.*
4. Any practitioner failing to give such a certificate shall be liable upon summary conviction to a fine not exceeding £20.
5. Every medical officer of health shall upon the Act coming into operation prepare and keep a register of all women in *bonâ-fide* practice as midwives in his district, the said *bonâ-fide* practice to be certified by not less than thirty householders whom she has attended or by three registered medical practitioners residing or practising therein.
6. After the expiration of twelve months from the date of the Act coming into operation no midwife shall be placed upon the register of the medical officer of health unless she possesses a certificate in midwifery sanctioned by the General Medical Council, and no medical practitioner shall, after the expiration of the said twelve months, take any pupil midwife (except a registered medical student) or give to any person any certificate or diploma purporting to be a qualification to practise midwifery without the sanction of the General Medical Council.
7. The Local Government Board shall issue to every medical officer of health directions (which must be in accordance with the terms of this Act and its Appendix) as to the sanitary and other conditions the midwife must observe while nursing a case of labour. In every case where there are complications (a list should be added as an appendix) and where there is any rise in temperature above 100° F., or any post partum shivering (except immediately after labour), or any abdominal pain (not after-pains), or any suppression or offensiveness of the lochia, a registered medical practitioner shall forthwith be sent for.
8. Every medical officer of health shall annually send to every midwife upon his register a legibly printed copy of such instructions, and should any such midwife fail to carry out in her practice these instructions, the medical officer of health shall have power to prohibit her from attending lying-in women for any period not exceeding six months. In rural districts the midwife shall have the right of appeal to the medical officer of health for the county. Contravention of this section shall render the midwife liable to the penalties of a "prohibited person." Section 10.
9. Every medical officer of health shall make full enquiry into all deaths arising from sepsis in parturient women in his district.
10. Every medical officer of health shall have power to prohibit any midwife (not a medical practitioner) or other person engaged in nursing a case of puerperal fever from attending lying-in women for any period not exceeding two months. Any person contravening this section shall be liable, upon summary conviction, to a fine not exceeding £20.
11. Every medical officer of health shall periodically inspect the premises in which the midwives upon his register reside, and should any midwife or other person habitually receive into their premises pregnant women, a register of the same, approved by the Local Government Board, shall be kept. The medical officer of health shall periodically inspect the said register and shall have power of entry into any premises of which the said midwife is the tenant or which may be used by a midwife or other person for the reception of pregnant women. This section shall not apply to public hospitals. Any person contravening this section shall be liable to the penalties of Section 10.
12. Every registered medical practitioner may report a midwife to the medical officer of health or to the examining board from which she obtained her certificate for any breach of the instructions issued by the medical officer of health, or of the conditions under which her certificate was granted, and the said board shall have power to either cancel the certificate or to prohibit the midwife from attending lying-in women for a definite period. For any contravention of this section the midwife shall be liable to the penalties attached to a "prohibited person." Section 10. This section shall not apply to medical practitioners.
13. Every registered midwife shall have the right to recover her charges for attendance as a midwifery nurse. This section shall not apply to registered medical practitioners.
14. Every medical officer of health shall have power to warn any unregistered person assuming the title of midwife or practising midwifery in his district to cease doing so if in his opinion such practice is dangerous to the lives of parturient women. Should the warning be disregarded the offender shall be liable to the penalties of Section 10.
15. Every medical practitioner upon being called to attend a case of still-birth shall forthwith certify the fact to the medical officer of health for the district, and shall receive for each such certificate the sum of 2*s.* 6*d.* from the sanitary authority. No person shall inter, or cause to be interred, or give authority for any uncertified stillborn child to be interred, without the written authority of the medical officer of health. Any person contravening this section shall be liable to a penalty not exceeding £10.
16. Every sanitary authority shall pay to the medical officer of health for the duties connected with this Act any sum of not less than £2 and not more than £50 per annum.

To the Editors of THE LANCET.

SIRS,—The pathetic cry on behalf of midwives by a number of ladies, wives of members of Parliament and others, in the London newspapers some months ago seems to be lost sight of just now in the discussion on midwives' registration.

This "cry" was considered useful at that period and served well for the insertion of the thin edge of the wedge—namely, asking for registration for the benefit and the protection of these poor mothers. But now the "cry" has been dropped, and if midwives are registered they will be empowered to attend any of the mothers of England, rich or poor, for they will be recognised by law, and the confidence of the public will be increased as to their capabilities, and simply because of this legal stamp. If the above "cry" was to obtain for these poor people more reliable and skilled attendance in their hour of need, why stop at registering women "midwives" only? What about the large army of *men* who have taken out their full medical curriculum and have not been able to fully qualify and register according to law as medical practitioners? Why are they not considered? Because they have not had the Obstetrical Society of London to negotiate for them with the General Medical Council, as Dr. Champneys has told us was done for these women in his presidential address delivered a fortnight ago.

In reply to registering men they will say: "No; that would be a retrograde step, and would be opening a door for unqualified practice." We retort: "Is not registering uneducated women to practise midwifery a much greater retrograde step than it would be to register as 'midwives' those men who are all but qualified as medical men?" If registration is for the benefit of the "poor mothers of England," would this latter plan not give them more skilled aid than women can offer them? I shall be glad if registrationists will answer these questions. I fear these poor unqualified men of England have not gone the right way about it. If they could have "negotiated" with Dr. Champneys and the Obstetrical Society of London and obtained their "diploma" then they would have had powerful diplomatists at their back, who would have interceded for them with the General Medical Council, and they would now have been in possession of a document recognised by that august body. And yet, on the other hand, the executive committee of the General Medical Council resolved on Monday, Feb. 24th, 1895, that "the Council *cannot approve of any document* professing to qualify persons for any practice in medicine, surgery, or midwifery issued by any body or institution which is not a medical authority under the Medical Acts." Surely this looks very like a solution of continuity when they approved of the certificate that Dr. Champneys refers to of the Obstetrical Society of London in May last.

I wonder what those who have been punished at various times by the General Medical Council by being struck off the Register will think of those who had been "warned" "negotiating" with their judges? Does this not look as if there is one law for the high and another for the lowly who have no influential "negotiators"?

I am, Sirs, yours truly,
G. H. BROADBENT.

Ardwick-green, Manchester, Feb. 22nd, 1896.

"FUNCTIONAL APHONIA IN MAN; TREATMENT, ETC; WITH SPECIAL REFERENCE TO SO-CALLED VARICOSE VEINS AT THE BASE OF THE TONGUE."

To the Editors of THE LANCET.

SIRS,—Having read the communication by Dr. Herbert Tilley and the correspondence which followed it, we consider it our duty to say that from personal experience we fully endorse the views set forth by Dr. Tilley and by Dr. Watson Williams.—We remain, Sirs, yours truly,

HENRY T. BUTLIN.
F. DE HAVILLAND HALL.
GREVILLE MACDONALD.
FELIX SEMON.
CHARTERS J. SYMONDS.

London, Feb. 24th, 1896.

To the Editors of THE LANCET.

SIRS,—It appears to me that Dr. Herbert Tilley has done good service to all concerned—whether specialists or patients—in bringing prominently forward the question of enlarged veins at the base of the tongue as a cause of throat symptoms. They may sometimes be so; negation is always difficult; and in science absolute negation implies the adoption of an unscientific attitude. At the same time my firm belief is that varicose lingual veins very rarely cause any trouble, because true varix in this situation is so extremely uncommon. On the other hand, if we are to cauterise every visible venous radicle which appears in front of the epiglottis we shall put our patients to much needless inconvenience and perhaps to some very unnecessary expense. These are my sentiments on this question which, judging by the somewhat heated language employed by some of your correspondents, must appear to them to be of considerable importance.

I am, Sirs, yours faithfully,
P. MCBRIDE.

Chester-street, Edinburgh, Feb. 25th, 1896.

To the Editors of THE LANCET.

SIRS,—I trust that you will allow me to endorse the remark of Dr. Watson Williams in your issue of the 22nd inst., to the effect that "so-called varicose veins may be more frequently observed in patients who do not complain of any throat trouble at all, and that their importance has been greatly exaggerated." This exaggeration, I think, is due in a great measure to an imperfect appreciation of the condition which constitutes true lingual varix, judging from the frequency in which I find the term applied to simple prominence of the pharyngo-glossal veins. Owing to their superficial position these vessels even in the healthy subject form a very prominent feature in the laryngeal mirror, and they are extremely susceptible to variations in venous tension. But simple prominence does not constitute varix. The term is only justified when the veins are greatly distended, tortuous, and marked with moniliform swellings not inaptly likened to black currants or strings of black beads. This is a condition justly associated with symptoms as well defined as those due to varix in other well-known situations and which generally coexist, in fact lingual varix is more often merely part of a general tendency to varix. Further, I also heartily support Dr. Watson Williams in his plea for "taking a broad-minded view of patients whose symptoms are localised in the throat," but I cannot subscribe to his somewhat cryptic allusion to "turbinal varix" as taking precedence over elongated uvula and so-called lingual varix as a mythical etiological factor. Although each of these states may be associated with its own peculiar local symptoms, their pathological association with a purely functional aphonia is not easy to define. For the term "turbinal varix" I am alone responsible, its selection being due to my interpretation of the morbid anatomy of a certain condition, the frequent cause of nasal stenosis, generally coexistent with varix elsewhere.[1] Since this disease constitutes one of the most severe and persistent forms of nasal obstruction, it is scarcely in accord with clinical experience to classify it with elongated uvula, otherwise the fundamental principles of rhinology will require reconstruction.

I am, Sirs, yours faithfully,
WYATT WINGRAVE,
Assistant Surgeon to the Central London Throat and Ear Hospital.

Devonshire-street, W., Feb. 25th, 1896.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me space to answer the questions and remarks of the correspondents with reference to the above-named subject in THE LANCET of Feb. 22nd? Referring to Dr. Holloway's letter I do not infer, but I assert, that no varicose veins at any time existed in the patient's tongue, for the simple reason that his usual medical attendant, who constantly uses the laryngoscope, examined his throat after hearing the specialist's opinion and found only the small ordinary veins at the base of the tongue present.

Mr. Jakins writes that he has never taught or heard that functional aphonia is due to varicose veins in the tongue. I do not think any reader of my cases will allow I inferred he did so; I simply cited a case of functional aphonia which was said to be due to varicose veins at the base of the tongue, was treated for the same by the galvano-cautery without relief, and was then advised to have turbinectomy performed. I believe Mr. Jakins will agree with me in the extravagance of the suggestion.

As regards Mr. Lennox Browne's letter, I will do my best to

[1] THE LANCET, June 15th, 1895.

answer each point *seriatim*, but candidly acknowledge that I am unable to cope with him in the matter of ethics. 1. "Dr. Herbert Tilley names no names." In publishing the cases referred to I had no wish to individualise any institution or its officials. I wrote *pro bono publico*, feeling that I was doing my duty to my profession and especially to that branch of work to which I devote my time, and for whose good reputation I am solicitous. If, however, Mr. Lennox Browne wishes for the names of the consultants referred to and the patients I shall be perfectly willing to publish them (with their permission and that of the editors) in a coming number of THE LANCET. 2. I am acquainted with most of Mr. Browne's treatises on the subject and have carefully read the last-mentioned of them in the current number of the *Liverpool Medico-Chirurgical Journal*. I am amazed in reading there that he has, amongst 1547 private patients seen within three years, no less than 438 cases (less than 1 in 4) of lingual varix. As a result I am more than ever inclined to doubt the value of his observations. 3. Mr. Browne is apparently much perturbed because I only write of three cases. These are only samples. If he prefers a much larger number I can supply them and, if he so desires, the specialists consulted shall be named, with the permissions previously alluded to. 4. Finally, Mr. Browne is obviously incensed that one younger than himself should challenge his observations. May I be allowed to point out, although Mr. Browne may have been working at diseases of the throat longer than I have, that mere seniority is no proof of greater correctness in observation and interpretation, and I am deeply sorry that, with all his experience, he has not been able to find a better explanation of the cases than he has done.

I am, Sirs, yours truly,
HERBERT TILLEY, M.D. Lond.

Welbeck-street, W., Feb. 24th, 1896.

PROFESSIONAL SUBJECTS IN LAY PAPERS.

To the Editors of THE LANCET.

SIRS,—With reference to an article which appeared in the *Globe* of Feb. 18th I have received the enclosed letter from the honorary secretaries of the Medical Society of London which I have their permission to publish. I should feel obliged by your kindly inserting the same in your next issue.

I am, Sirs, your obedient servant,
HERBERT F. WATERHOUSE.

Wimpole-street, W., Feb. 25th, 1896.

[COPY.]
The Medical Society of London, 11, Chandos-street, Cavendish-square, W., Feb. 24th, 1896.

DEAR MR. WATERHOUSE,—Your note of the 20th inst. was considered by the Council this evening. They regret that your case of bone grafting, shown to the Society on Feb. 10th, should have been commented upon in a non-professional paper, which unfortunately mentioned you also by name. The Council have ascertained that the paragraph appeared entirely without your knowledge and sympathise with you in your annoyance at the occurrence.

Yours truly,
AMAND ROUTH, } Hon. Secs. to
G. R. TURNER, } Medical Society.

SUBJECTIVE VISUAL SENSATIONS.

To the Editors of THE LANCET.

SIRS,—In accordance with a suggestion of Dr. Gowers, who delivered the Bowman Lecture of the Ophthalmological Society last year upon the Visual Phenomena connected with Epilepsy and Migraine, we are desired by the council of the above society to invite from members of the medical profession any observations they may be willing to record. It would seldom be possible to obtain accurate descriptions or drawings of such sensations from laymen, but it is felt that valuable information might be obtained if members of the profession who are themselves the subjects of migraine would put into writing detailed accounts of the visual symptoms from which they suffer in connexion with an attack. The value of these descriptions would be enhanced if they were accompanied (where possible) by drawings or diagrams of the appearances. It seems likely that the knowledge of the natural history of migraine and allied cerebral conditions might be greatly increased if a large number of such well-recorded experiences could be gathered together and classified. The nucleus of such a collection has been formed and presented to the society by Dr. Gowers, and the council will be very glad if any of your readers who can do so will help to enlarge it. We shall be glad to receive any communications that may be sent to us.

We are, Sirs, yours faithfully,
S. H. HABERSHON, 70, Brook-street, W.,
J. B. LAWFORD, 99, Harley-street, W.,
Honorary Secretaries of the Ophthalmological Society of the United Kingdom.

Feb. 24th, 1896.

WITH DR. JAMESON'S MEN ON BOARD THE "HARLECH CASTLE."

To the Editors of THE LANCET.

SIRS,—I have just returned from Natal to Plymouth as medical officer to the *Harlech Castle* and as medical officer to Dr. Jameson's men and officers on board the *Harlech Castle*. I thought it might interest you to have a short account of the sickness amongst them. I enclose a photograph of a few of the wounded. Dr. Jameson's column came on board at Natal on Jan. 24th—viz., Dr. Jameson, 294 men, 23 officers, and 10 women and children; Imperial escort, 18 men, and 2 officers. The men were naturally a very robust body, in age averaging from twenty-three to thirty-five years; but as I am told by the officers and men that after their celebrated march they were confined in Volksruit and Pretoria gaols, where the sanitary arrangements were very primitive and the stench horrible, Surgeon-Captain C. H. Hale brought on board with him 18 men—11 gunshot wounds, 5 cases of dysentery, and 2 cases of malarial fever—whom he placed under my charge. Three of the wounded were transferred three days later and sent to their homes at the Cape.

Illustration reproduced from a Photograph of Wounded taken on board the "Harlech Castle."

The numbers read from left to right in the illustration.

1. Bullet wound and compound fracture of the forearm.
2. Compound comminuted fracture of the forearm.
3. Bullet wound of side.
4. Bullet wound of side; paresis.
5. Bullet wound in the hand.
6. Bullet wound of arm and side.
7. Surgeon in charge.

The wounds all progressed very favourably, being dressed with antiseptic precautions; the cases of dysentery progressed favourably, as did also the malaria, but typhoid fever broke out on Jan 30th.

A trooper came to see me at about the end of the second week of the disease. I understand from his comrades that for some three months he had been in a weak state of health, but did not care to ask for medical attention. When he applied to me I immediately isolated him, disinfected his cabin, and took the usual precautions. I then asked Mr. E. C. F. Garraway, Mr. W. H. F. Farmer, and Surgeon-Captain Seton Hamilton, who had been with them in the field, if they would kindly meet me to see if anything further could be done, but in spite of all our efforts he sank and died at about the end of the third week. His case was complicated with

meningitis, and from the first he had very active, long delirium. This case was followed by 6 other cases of typhoid fever, 25 mild cases of dysentery, and 28 cases of malarial fever. There was also an average of from twenty-five to thirty general minor ailments per diem, and, with the exception of six cases of typhoid fever, which were through their third week, one case of malaria, and one convalescent from typhoid fever, all were well when we arrived at Plymouth. These eight cases were transferred to the hospital ship at Plymouth. My general opinion of the men was that they were fine specimens of the nationality to which they belong and that the officers were a real good set of fellows.

I remain, Sirs, yours very truly,

FRED. G. LLOYD,
Surgeon to the *Harlech Castle*: Surgeon in Charge of Dr. Jameson's men from Natal to Plymouth.

Feb. 25th, 1896.

"THE PROPER TEMPERATURE FOR VAGINAL INJECTIONS."

To the Editors of THE LANCET.

SIRS,—With reference to the case reported in the *Leeds Evening Express*, upon which you commented in THE LANCET of Feb. 15th under the above heading, I anticipate that you will be willing to permit me, through your journal, to thank those members of my profession—nearly fifty in number—who have kindly defrayed my entire expenses in the matter. It would give me much pleasure were I at liberty to publish the names of those who have thus helped me, but you will see that the list which I now forward for your perusal includes most of the best known practitioners both in the centre and outlying districts of Leeds, and as to most of them I myself am entirely unknown I am led to regard their action as due to a feeling that I have been mulcted in damages contrary to the weight of evidence for the results of an accident (which none regret more than myself) which occurred in consequence of a correct line of treatment necessarily under the circumstances carried out hurriedly in a moment of supreme danger. I trust my unfortunate experience may be of service to others, but would regret were it to have the effect of deterring any medical man from doing his utmost to save a life in imminent danger for fear of consequences, however unpleasant to himself.

I am, Sirs, yours faithfully,

Armley, Feb. 19th, 1896. JAMES LAMONT.

"POINTS UNDER THE INFECTIOUS DISEASES (NOTIFICATION) ACT."

To the Editors of THE LANCET.

SIRS,—Dr. Leonard Cane's letter to, and his answer from, the Local Government Board opens up a very interesting question. Here (in Leicester) we are expected to notify each and every case of infectious disease which occurs in a house, but are only paid for the first one notified. The assistant secretary to the Local Government Board distinctly says that "the town council must pay the prescribed fee for each certificate, whether or not it relates to a person belonging to a family in which the presence of infectious disease has already been notified." It would be interesting to know why we Leicester practitioners are not thus paid. An elucidation of this question would be welcomed by all of us, including,

Yours faithfully,

Leicester, Feb. 22nd, 1896. W. L'HEUREUX BLENKARNE.

*** The Leicester system of compulsory notification is carried out, not under the general Act, but under the Leicester Corporation Act, 1879. That Act contains the following provision, Section 8 (5): "The corporation shall pay to every medical practitioner who shall, in pursuance of this section, duly make and give any such certificate or declaration a fee of 2*s*. 6*d*. for each such certificate or declaration, but only one such certificate need be given and only one such fee shall be payable within an interval of thirty days to the same medical practitioner for certificates given by him in respect of the same disease occurring in the same building." This system was studiously avoided in the general Act of 1889, and it has many obvious disadvantages. Thus, no trustworthy statistics of infectious sickness can be obtained and no rate of fatality to attacks can be ascertained.—ED. L.

To the Editors of THE LANCET.

SIRS,—Would you kindly inform me through the columns of THE LANCET if the urban district council are justified in the following actions? I notified fifty-five cases at the end of last year charging half a crown as usual, and which previously has always been paid; without any notice I am sent a cheque for £3 11*s*. 6*d*., with the information that in future the council will only pay a shilling for cases other than private. I am medical officer to a society for the miners employed by a company here, and which is only for their working men. Would you kindly inform me if this is a legal act and is what is meant by the Notification Act of 1889, which speaks of public bodies and institutions?

I am, Sirs, yours truly,

J. W. HUDSON, L.R.C.S., L.R.C.P. Edin., L.S.A.

Millom, Carnforth, Feb. 18th, 1896.

*** We are of opinion that the urban district council are altogether in error. The question has been discussed before and it has been decided that whilst "public body or institution" includes a public hospital or infirmary, that expression does not include private hospitals to which patients are admitted for payment, or a medical club, or a dispensary. In the case submitted the medical attendance on a miners' society is carried out by a private medical practitioner. We should advise, in the first instance, that a detailed statement of the circumstances be submitted to the Local Government Board and that their opinion be asked.—ED. L.

NUTROA FOOD.

To the Editors of THE LANCET.

SIRS,—My attention has been called to an advertisement in pamphlet form of a food called "Nutroa" which is stated to have the same composition as my "ideal diet for children." I wish to state (1) That the use of my name in these advertisements is without my sanction; (2) that the expression "ideal diet for children" has never been used by me in any of my writings; and (3) that the figures quoted are taken from my work on Chemical Physiology, which gives the average minimum diet (a very different thing from ideal diet) for persons of different ages. The figures selected by the advertisers are those for children between the ages of six and fifteen; the entirely different figures given on the same page for infants under the age of one year and a half are ignored. Nutroa food is advertised as a substitute for human milk, and therefore presumably intended for those under eighteen months of age. I may state in conclusion that since seeing the advertisement I have examined a sample of this food, and that I do not consider it in any sense a substitute for human milk.

I am, Sirs, yours faithfully,

King's College, Feb. 21st, 1896. W. D. HALLIBURTON.

"THE EAST LONDON WATER INQUIRY."

To the Editors of THE LANCET.

SIRS,—With reference to your annotation upon the subject of the report of the inspectors of the Local Government Board as to the service of the East London Waterworks Company, may I be allowed to point out the drawbacks of a branch service pipe as recommended by you? The inspectors very properly advocate the provision of properly designed domestic storage cisterns, and you maintain "that for the exclusive purpose of a drinking supply water direct from the main should, when possible, be drawn. This does not mean the abolition of cisterns, or of some means of domestic storage, for the service-pipe may be made to branch into two, the one to feed the cistern and the other to supply directly to the tap." If this arrangement be adopted the consumer would naturally utilise the direct tap with the result that the water in the cistern might be undisturbed for months. Should a breakdown of the constant service impel a resort to the water in the cistern the consumer would have at his disposal water dangerously stale and stagnant. If a cistern is properly designed, and in principle is but an enlargement of the

service-pipe, there must be every reason to think it would be best to draw all water through that cistern rather than incur the risks I have pointed out which arise from a dual service-pipe. There are one or two cisterns on the market which perfectly embody that principle of the enlargement of the service-pipe, and it was upon this aspect of the water-supply that last autumn I presented a special report to the Poplar District Board of Works, a copy of which was forwarded to you at the time. I am, Sirs, yours truly,

RUSSELL MAIN TALBOT,
Feb. 21st, 1896. Medical Officer of Health, Bow.

*** Mr. Talbot has overlooked the fact that the cistern would be constantly emptied and refilled for the requirements of flushing purposes. Under the circumstances it is not clear how the water could become "dangerously stale and stagnant."—ED. L.

"PEROXIDE OF HYDROGEN."

To the Editors of THE LANCET.

SIRS,—In connexion with Mr. Page's caution concerning the "explosive tendencies" of solutions of peroxide of hydrogen[1] I would like to offer a caution from the clinical aspect. Some time since a boy was under my care with spinal caries and a large iliac abscess. Having opened and cleaned out the interior of the abscess cavity I proceeded to give it a washing with a solution of peroxide of hydrogen, introducing the nozzle of a syringe into the cavity for that purpose. On finishing the irrigation I found, greatly to my surprise, that the oxygen had been liberated with such energy that it had found its way up between the aponeurosis of the abdominal muscles and the superficial fascia, causing an enormous emphysema. A slough formed in due course, and when it became detached the aponeurosis was found denuded from over the false ribs (on the left side) down to Poupart's ligament, across the median line, and over to the left flank. We had a most anxious and apprehensive time with the child, but greatly to my relief he eventually recovered. I am, Sirs, yours faithfully,

EDMUND OWEN.

P.S.—I have quite done with peroxide of hydrogen.
Great Cumberland-place, W., Feb. 24th, 1896.

To the Editors of THE LANCET.

SIRS,—My attention has been directed to the letter of Mr. Herbert W. Page in THE LANCET of Feb. 22nd, and I shall be glad if you will allow me to point out that peroxide of hydrogen, as ordinarily manufactured, is always more or less prone to spontaneous decomposition into water and oxygen gas, and no doubt at times the decomposition is rapid and even attended with explosive violence.

It was from an intimate acquaintance with this subject that some years ago I was led to make a long practical inquiry into possible means of preserving that substance against chemical change, and in the result I discovered a means which was patented, and I may be allowed to add that the Sanitas Company have now for some years past been preserving peroxide of hydrogen by means of my process.

As thus made, peroxide of hydrogen is a perfectly safe article to handle, and it may be kept almost indefinitely without loss of strength. So little is it liable to change that it may now be shipped in wooden casks to America and Australia, a thing which is absolutely out of the question with peroxide of hydrogen as ordinarily prepared.

Peroxide of hydrogen is an exceedingly valuable liquid for many applications in surgical practice, apart from its industrial value as an oxidising agent, and when better known it will, I am sure, be used on an immensely larger scale than it is at present.

I am, Sirs, yours faithfully,
Feb. 25th, 1896. C. T. KINGZETT, F.I.C.

"PHARMACY AND PHARMACOLOGY."

To the Editors of THE LANCET.

SIRS,—Dr. Murrell's timely letter in THE LANCET of Feb. 22nd deserves to be cordially endorsed by everyone who wishes to see the practice of medicine and surgery put on as scientific a basis as possible. As Dr. Murrell says, pharmacology can be taught despite the Vivisection Acts; and even if students were only shown the most elementary experiments of the physiological action of medicinal bodies it would give them a grasp of the subject which few at the present day possess. After all, as students we only need be taught general principles, and upon this broad foundation we could build up our knowledge. It is only by adopting and making compulsory the attendance on lectures on pure pharmacology that examining boards can hope to get a class of men with a good fundamental knowledge of the laws of therapeutics. Perhaps no subject is so slurred over as the subject of therapeutics, and consequently on no subject of the whole student's course do we find so dense ignorance. Why, every dealer thinks he has a right to dictate to us combinations of drugs and chemicals, and we are flooded with mixtures, emulsions, pills, tabloids, and concoctions of all kinds, and we are asked to make our patients swallow them. Surely there must be some reason for it, and I ask, Is it not our ignorance of the subject of therapeutics? To remedy this state of things, then, let us see that the future medical man is educated in thorough knowledge of medicinal agents and he will then be able to suggest his own combinations. We often laugh at the laity in their support of quackery, but I often wonder if we are much better than they are.

I am, Sirs, yours faithfully,
GORDON SHARP, M.B. Edin.
Grafton-street, Leeds, Feb. 25th, 1896.

QUALIFICATIONS FOR HOSPITAL APPOINTMENTS.

To the Editors of THE LANCET.

SIRS,—THE LANCET of Feb. 15th has in it an advertisement on the part of the Great Northern Central Hospital whereby it is made known to all men that the post of obstetric physician to out-patients is open only to Members or Fellows of the Royal College of Physicians of London or of the Royal College of Physicians of Edinburgh. Now there is another College in this at present United Kingdom having the same privileges and Royal sanction as both of these and the same statutes and disciplinary regulations as the London College, though differing somewhat from the other in this latter respect. Is it possible that the Great Northern Central Hospital has not yet heard of the Royal College of Physicians of Ireland? And if it has I would ask, What fact within the knowledge of its managers makes the diplomates of that College unfit for the competition they invite? One must assume that the managers wish to do their best for the administration of the charity—that is, of the public money entrusted to their care—and to secure the best men for their honorary staff. Then it may be asked in the first place, Why restrict the applicants at all? The larger the choice the better the selection. Secondly, if they see a special virtue in the membership of a college, why do they omit the Irish College? Above all, why accept the Scottish and reject the Irish diploma? The last question, though it deals with the greatest absurdity, is perhaps the easiest to answer in a speculative way. The boycott implied in the advertisement has hitherto been exercised by English hospitals in favour of the London College and by Scottish institutions in favour of the Edinburgh College. In Ireland it has been obsolete these many years. Irish medicine and Irish charities have taken the lead in stigmatising the system of protection in the medical industry. The question of reciprocity with Ireland, therefore, does not arise. Are the novel tactics of the Great Northern Central Hospital inspired by the fallacious doctrine of fair trade? It may be so. It happens also that the staff of the hospital is so fortunate as to include a good proportion of gentlemen whose names bewray them as coming from beyond the Tweed. If it is their loyalty and patriotism that has secured the acknowledgment of their College it is much to their credit and they are to be congratulated. But why is the Irish College so pointedly excluded? Is it lest the master of the Rotunda should don the white robe? The Great Northern Central Hospital may dismiss the apprehension; but the geographical expansion of the predominant partner is singularly ill-timed when it operates by proclaiming to the public that the alumni of a College so closely connected with the greatest school of midwifery in the world are unfit for the post of assistant obstetrician at a London suburban hospital, and not only unfitted to hold the post, but unworthy to engage the attention of those who have the patronage of it. If

[1] THE LANCET, Feb. 22nd, 1896.

the Irish Royal College of Physicians is alive to the interests of its members, if it can at last be made aware of the damaging effect upon its reputation produced by a class of advertisements of which this is the latest and most extreme development, an explanation will be asked and doubtless will be forthcoming. Meanwhile, the system of exclusion in its more usual form has been three times condemned by resolution of the British Medical Association and has been commented upon severely by Lord Sandhurst's Committee (Metropolitan Hospitals Enquiry); it has received the editorial censure of THE LANCET; and when an appeal has been made from certain hospital boards to the body of subscribers whom they are supposed to represent the matter has invariably been decided in accordance with the sense of justice and fairplay which belongs to the English people. Such appeals seem to be the only remedy, but they are vexatious and expensive, and it is much to be hoped that the governing bodies of English hospitals will see fit of their own accord to dispense with their necessity.

I am, Sirs, yours truly,

Wimpole-street, W. JAMES CAGNEY.

"THE NAUHEIM TREATMENT OF HEART DISEASE."

To the Editors of THE LANCET.

SIRS,—With reference to the article upon this subject which was published in THE LANCET of Feb. 15th, it appears that an important constituent in the mineral waters of Nauheim was not present in the baths given at the National Hospital for Diseases of the Heart and Paralysis. I refer to carbonic acid gas. It is possible that to this powerful agent more than to any other should be given the credit of the undoubtedly good results by which the baths of several well-known watering-places have acquired their reputation. The experiments of Grandeau, Roussin, Seguin, Currie, and others point to the positive conclusion that under the ordinary conditions of a mineral bath there is no appreciable absorption of the mineral constituents by healthy skin. With regard to the gases contained in a mineral water, it has been shown that the skin will more readily absorb these than the more solid ingredients; but it seems much more reasonable to believe that the great proportion of the effect produced is due not to absorption by the skin, but to direct inhalation into the lungs. The patient lies submerged to the chin, with mouth and nose on a level with the surface of the water and in a stratum of the gas which is continually being given off. The amount of carbonic acid gas given off in twenty-four hours by the Frederich William Sprudell at Nauheim is reckoned at 48,000 cubic feet. The amount given off at the sources of Kissingen, of Vichy, and of Schwalbach is equally considerable. At each of these and similar sources a lighted taper approached towards the surface of the water is immediately extinguished.

At all baths where carbonic acid gas is present in any quantity it has been found necessary *to regulate very carefully* (1) *the duration of the immersion*, (2) *the temperature, and* (3) *the amount of agitation of the water*. An extension of five or even three minutes in the period of immersion will cause a markedly different result, as will also a comparatively small alteration in the temperature or in the amount of agitation of the water. These last two conditions directly influence the liberation of the gas, and it seems more reasonable to attribute the difference in result produced by prolonging the immersion for so short a period as three or five minutes to direct inhalation of the gas into the lungs than to its absorption by the skin, which is known to take place only slowly. As regards the effect produced upon the heart by baths such as those of Kissingen, of Nauheim, of Schwalbach, of Vichy, or of Kniebis, it is no uncommon thing for the pulse-rate of a healthy individual to be reduced from the normal to 50 or even 40 within half-an-hour of taking a bath. From this depressed condition it will gradually rise in the course of a few hours to a frequency above its usual rate. *I believe that the beneficial result from this class of bath is due almost entirely to the action of the carbonic acid gas given off and to the reaction it induces.*

In many cases a beneficial result is not obtained for some time after the course of baths have been taken, the result being dependant upon the after cure in a well oxygenated atmosphere in order that the reaction induced may be as great as can be endured. And upon this point I believe that in some cases the reaction may be induced to too great an extent and with disastrous consequences. I have in my immediate knowledge the similar cases of two persons who, after a course at Nauheim, went for the after cure to what was probably too high an altitude, with the result that in each case pericarditis quickly supervened and terminated fatally—an unfortunate issue which I attribute to too great a reaction having been induced.

I am, Sirs, yours faithfully,

Curzon-street, Mayfair, Feb. 15th, 1896. RALPH BROWNE.

"TO THE DEGRADATION OF THE SPECTATOR."

To the Editors of THE LANCET.

SIRS,—Permit me to ask (in justice to the universally acknowledged good and proper conduct of the Royal Aquarium) for a modification of your expression of disapproval *re* the trance. I hope you do not, in your issue of the 15th inst., use the term "disgusting" in opprobrium. As a matter of fact, there is nothing in any way disgusting or unseemly in the exhibition. Probably your remarks are more especially intended to suggest that such exhibitions are better suited to medical institutions, and in that view I cordially agree.—I am, Sirs, faithfully yours,

JOSIAH RITCHIE,
Chairman and Managing Director.

Royal Aquarium and Summer and Winter Garden Society, Limited, Feb. 21st, 1896.

*** We print Mr. Ritchie's letter which comments upon an annotation entitled "To the Degradation of the Spectator," which appeared in our issue of Feb. 15th. We are happy to admit that the Royal Aquarium is conducted with a propriety as conspicuous as are the length and variety of its programme. We are happy also to see that Mr. Ritchie agrees with us in thinking that such an exhibition as the recent one of hypnotic trance could have been given in more suitable places than within a building devoted to popular entertainments; but surely, as managing director, he could have remedied this in the past and can do so in the future.—ED. L.

"UNSUCCESSFUL PROSECUTIONS UNDER THE MEDICAL ACTS."

To the Editors of THE LANCET.

SIRS,—With reference to your comments, which appear in your issue of the 22nd inst. under the above heading, upon the recent decisions of the Cardiff Stipendiary in the prosecutions of "Bridgwater and Frikart" instituted by our clients the Medical Defence Union we may inform you, for the information of your readers, that the Union are taking steps with the view of obtaining the decision of the High Court in each case. Application has already been made to the Stipendiary to state a special case in reference to each prosecution, but he has declined to do so, and further action in connexion with the position will be taken by us forthwith.

We are, Sirs, yours obediently,

35, King-street, Cheapside, E.C., Feb. 27th, 1896. HEMPSONS.

"A QUACK DOCTOR WITH 'ONE OR TWO ASSISTANTS.'"

To the Editors of THE LANCET.

SIRS,—The jury have returned a verdict in the case upon which you commented under this title last week that deceased died from natural causes, but that they considered that the conduct of Townson, if the law could not reach him, called for severe censure. We in Liverpool are anxious to see if the local authorities will institute a prosecution here. In Liverpool there appears to be great confusion in the minds of the legal and of the police authorities as to the person upon whom lies the onus of prosecution in these cases. It clearly cannot be the duty of the medical profession to do so. For the sake of argument, were this duty laid upon them, would not the public, who in this country almost demand quackery, look with suspicion on their action and attribute their motives to professional jealousy? Clearly the time has

arrived when the law should be so altered that it would become as impossible for a quack to practise medicine as for a quasi-solicitor to practise law. Our unfortunate profession seems to be the prey for unsuccessful candidates in other walks of life, if we are to judge by the irony of expression of the man Townson, who calmly informed the deputy coroner that when all his previous occupations had failed "he had to return to the medical profession." Need anything further be added as an argument in favour of some legislation against quackery when we have an admission like this made in open court by a man who for eleven or twelve years had been duping the public and successfully carrying on his business with the help of two assistants, and this at a time when so many competent and duly qualified men are struggling for a bare existence? The situation is emphasised by the facts that about two years ago one of the advertising fraternity here was convicted and sentenced to penal servitude, and for the "infamous conduct" of being associated with and "covering" him a duly qualified and registered surgeon was summoned by the General Medical Council to appear before them and his name was erased from the Register. This man continues to practise in Liverpool, his name appearing in the local directory as "Surgeon" in one part and "M.D." in another. I am, Sirs, yours faithfully,

Feb. 22nd, 1896. LIVERPUDLIAN.

"EXAMINERS AND EXAMINEES."

To the Editors of THE LANCET.

SIRS,—I was up for the Conjoint Board Examination in Midwifery and Surgery last time and I had the opportunity of mixing with and hearing the remarks of all classes of candidates. I also had practical experience of the manner of the examiners in midwifery and surgery, and in both instances I am glad to say I found myself treated with courtesy—in fact, I may say, as a gentleman. All the other candidates I spoke to made no complaint, and many in medicine also seemed quite satisfied; but there were several of the latter, I am sorry to say, who bitterly complained of the "manner" of the examiners in medicine. None of the candidates whom I saw complained of the difficulty of the questions asked, but they certainly complained of the manner in which they were asked and of the way the replies were received. Most of them were successful, so they were not annoyed at not having passed. Now, Sirs, it seems to me, from what I have seen and heard, that the examination in medicine has arrived at a high pitch of notoriety for the manner of the examiners, not especially to those who fail, but to those also whom they allow to pass. What I ask as a candidate is not that the questions shall be easy, but I do ask that they will be asked as by one gentleman to another. The surgeons and gynæcologists seem to be able to do this, why cannot the physicians also? The candidate well knows that for "cheek" he can be referred for twelve months; he is, therefore, securely muzzled. Surely, Sirs, under these circumstances we have the right to demand to be treated with courtesy and not as—my powers of analogy almost fail me, but shall I say—as a pickpocket before a metropolitan magistrate.

I am, Sirs, yours faithfully,

Feb. 16th, 1896. CANDIDATE FOR APRIL EXAMINATION.

MEDICAL AID ASSOCIATIONS AND PROFESSIONAL UNITY.

To the Editors of THE LANCET.

SIRS,—I held an appointment as medical officer to a friendly society's medical association. Owing to the late action of my College (K.Q.C.P. [now R.C.P.] I.), which now exacts from all who seek its diploma a solemn undertaking that they will neither hold office in nor associate themselves professionally with anyone holding office in any medical aid association, some months ago I gave up my appointment owing to this, and also because the society had considerably increased its membership and admitted persons to whom I strongly objected owing to the social and financial positions they held. Both at the committee meetings and at the public lodge and court dinners I always mentioned the injustice of admitting such persons at all, and especially at club rates or a fraction over. Now what has happened? A M.R.C.S. Eng. has stepped into my place, and this, too, in face of a somewhat similar opinion expressed by the English Royal College of Surgeons! Of what use was it for me to give up an appointment worth about £220 a year, with free house, cab hire, all drugs found, and a person to dispense medicines? Surely if we of the Irish College of Physicians are thus called out it is unjust and unfair for Englishmen, who voice their grievances so loud, to step into our places the next moment. I do not regret the step I have taken to uphold to views of my College and the dignity of the profession, but it seems a little hard to have to begin the world again when my place is immediately filled up by a M.R.C.S. Eng.

I am, Sirs, yours faithfully,

Feb. 24th, 1896. L.K.Q.C.P.I.

THE HUDDERSFIELD POISONING CASE.

To the Editors of THE LANCET.

SIRS,—I was sorry not to see any notice in THE LANCET of a very important point developed in this case. Justice Grantham deprecated the practice of passing articles for chemical examination through so many hands. Justice Hawkins made a similar complaint in the Lamson case. In the Flannigan and Higgins case a most important piece of evidence was nearly excluded because a police official was lax in preserving the identity of an important article. The moral is, obviously let the medical witness himself secure and lock up everything which ought to be sent to the analyst. This will save time, trouble, expense, and prevent a possible miscarriage of justice.—I am, Sirs, yours faithfully,

Feb. 26th, 1896. A JURISPRUDENT.

*** Our correspondent will find that we have dealt with the case in another column.—ED. L.

THE ASHANTI EXPEDITION.

(FROM OUR SPECIAL WAR CORRESPONDENT.)

MY last letter was sent off from Prahsu, which place I left just after daylight on Jan. 3rd, and crossing over the river by the recently erected pontoon bridge, of which I sent you a rough sketch,[1] we plunged once more into the African forest, and after a somewhat cooler journey than heretofore reached another rest camp, Asierman, at 2 P.M. About five miles out we halted at a native village for breakfast, and whilst seated partaking of the meal under the shade of a tree in the centre of the road, surrounded by wondering negroes, my eye suddenly caught sight of a young coloured child at the door of one of the huts a few yards from me looking very ill with a cloth wrapped round the head, whilst the face, neck, arms, and legs were covered with a pitted, pustular eruption closely resembling small-pox. Be it so or not, I considered it desirable to move on with as little delay as possible, and calling my head man intimated to him that he was to summon the bearers, pack up the belongings, and start afresh, determining to telegraph the fact back to the Principal Medical Officer at headquarters as soon as I conveniently could, so that any halting of the men might be avoided at this place on their way up from Prahsu to the front. The opportunity for doing so was afforded me at Asierman, and I am glad to say, from what I have since learnt, that stringent orders were issued that halting at the place indicated was strictly forbidden. We had not long been at Asierman before an officer who had come on behind me arrived from Prahsu with the intelligence that Major Bowden Powell, Major Gordon, and Lieutenant Pritchard, ahead with the native levies, were all down with an attack of fever and that some other officers were being sent up to relieve them with all despatch. At Asierman there is a fairly clear running stream of water which stood the chemical tests well, and the position of the camp had been rightly chosen, being on an elevated position and free from swampy surroundings. As the stream required protection a good Haussa guard had been kept near the crossing to prevent natives fouling it by bathing and washing their clothes in it, as they are in the habit of doing if not prevented by these aforesaid precautions. Heavy, dense, cold fogs were experienced in this place during the early hours of the morning. Leaving Asierman with my carriers and some sappers we pushed on and reached Akusirem on the 4th before evening had closed in. Before reaching—in fact, close up to—this place some very

[1] THE LANCET, Jan. 4th, 1896.

ugly, dark, unhealthy looking swamps were noticed, and on arrival we found the locality chosen for this rest camp anything but what it should be, being low and decidedly objectionable from a sanitary point of view, while I was not at all surprised to learn that two officers were here down with malarial fever. My attention was immediately called to the water-supply, which I found to be in strict accord with the other undesirable surroundings. To be brief, it was found to be both a snare and a delusion, being a mere water-hole of surface drainage from ground around, on which were deposits of an unmentionable character. The water turned litmus paper quite red and produced deposits from solution of nitrate of silver, acetate of lead, and Nessler's solution, besides taking the colouring matter from permanganate of potash in a few minutes—in fact, it was loaded with animal and vegetable matter to such an extent that I could only tell Major Sinclair that my opinion was that it was quite unfit, even after boiling, for human consumption. The officer commanding the advance instantly wired my opinion back to Prahsu, with the result that any stoppage for a night at this camp was countermanded, and as a visit by the Principal Medical Officer since has in every way verified my opinion the camp has been abandoned and given up altogether for the future. Surgeon-Colonel Taylor also noticed, as I had previously done, that all the banana and plantain trees had been cut down round the camp in this place; their foliage and stump ends lay scattered about and were rotting in the sun, producing quite a stench and adding greatly to the malarious influence of this dismal, wretched spot. The two officers sick here with remittent fever were about to be sent back to Prahsu; but the Principal Medical Officer, considering the matter over in his mind and knowing we ought in a day or two to be at a much higher elevation with a freer and better air supply at the Monsi Hills, determined to bring the ailing ones on, with what result will be presently seen. At 10 A.M. on the 6th Sir Francis Scott and staff arrived, and after learning from the lips of the Principal Medical Officer the true state of affairs determined to push on with all haste, and within two hours of the Commander-in-Chief reaching Akusirem the whole force had wisely quitted this pest hole and were well on their road to another rest camp, evidently better chosen as regards site than this one had been. On Jan. 7th, at 10 A.M., I breakfasted with the headquarter staff by the invitation of Colonel Bellfield. At 1 P.M. we passed up the native village of Sheramasso and at 2.30 P.M. came to an anchor once more at the newly erected camp of Bafra Edru. This place is approached by a gradual ascent, and the road to the hills lies about N.W. and S.E. Just beyond the camp is an excellent free-running stream of pure, good water, which will prove a great boon to some of the long-suffering, thirsty souls who have outlived an experience of Akusirem. I place this spot about 500 feet above sea level. The barometrical record pointed to the changes in climate may be experienced by an army corps bound from the coast to Kumasi and proves that a high temperature can be easily borne without any very serious results, but that a comparatively low one with great moisture instantly has an effect on the health of those employed in these West African campaigns. For instance, at Akusirem the temperature one day did not exceed 78°F., with a wet bulb nearly equal to it, and yet how desperately oppressive it felt. A languor was experienced that words fail to describe. Whereas at the place I am now dictating this letter from, on the north side of the Monsi Hills, some 600 feet above sea level, where the influence of the N.N.E. wind is felt, with a temperature standing at 90° in the shade, small inconvenience is felt. The effect of the change is simply marvellous. Why? Simply because the moisture point is so low and the increased heat can be borne with impunity. The Monsi Hill was crossed by my party at 8 A.M. yesterday, the 9th; its height I place at 1122 feet above sea level. From its summit nothing can be seen in consequence of the forest of trees that encircle it; if these trees could be cleared away no doubt an excellent view of the surrounding country could be obtained. Descending by an excellent but rather circuitous cut road a small waterfall was passed half-way down, and the new camp at Kwissa reached at 10 A.M., 600 feet above sea level.

For the first time the headquarter staff are in advance of my small party, for they reached Kwissa an hour or so before I came in, having left the composite battalion behind at the last place for them to follow on the following day. This specially-selected corps has so far proved a decided success. They appear well and have marched well, and have lost only two of their number so far, whereas the West Yorkshire had early in the march to send back some sixty-five of their comrades as unfit to proceed further towards Kumasi. The Haussas being ahead, I am unable to say what their casualties as far as health is concerned have been, but cannot speak too favourably of the manner in which the carriers have so far performed their share of the work, for out of, say, some 1200 carriers organised and commanded by Captain D. A. Donovan, Civil Police Force, not a man is reported as unfit at any rate up to this date. These fine fellows have now marched over 100 miles and carried an average weight of 45 lb. on their heads without turning a hair, so to speak, and have been exceedingly willing and obedient into the bargain.

Kwissa, the advanced camp at the north side of the Monsi Hills, about forty miles from Kumasi.
Jan. 10th, 1896.

We left Kwissa on Jan. 11th at 5 A.M. and joined the Special Service Batallion on march towards Kumasi. On starting I felt quite fit and had gone on foot with the men about six miles when suddenly I was seized with a fit of shivering and general prostration and had to immediately summon my hammock bearers. I got with difficulty into my cot. The officer in command instantly passed me through the troops, and had me quickly sent on to Essenquenta where Surgeon-Colonel Taylor was in medical charge. He pronounced my case one of fever and adopted measures accordingly. I must reserve a description of my personal experiences of this West African plague as I am feeling very debilitated after a whole week's detention on the sick list, and having been sent back to the *Coromandel* am here at Mansu to-day, Jan. 18th, much better, and so far recovered that I can return to my work in a day or two. Being within twenty miles of Kumasi it certainly seemed hard luck to be knocked down within a stone's-throw of our destination; but to-day (the 19th), as I expected when sent back a week ago, we learn by telegram from the front that the city of King Prempeh has been entered (Jan. 17th) without a shot being fired, and our campaign is so far at an end. Scarcely an officer who returns will be able to record the fact that he has escaped the fever, but happily most get over an attack in from about five to seven days.

Mansu, thirty-five miles from Cape Coast Castle,
Sunday, Jan. 19th, 1896.

THE HOSPITAL SHIP "COROMANDEL."

The medical transport *Coromandel* from Ashanti arrived at Plymouth on Feb. 25th with Sir Francis Scott, Prince Victor Christian, and a number of sick on board. It was proposed to land some of the troops at Plymouth, but as some difficulty arose about *pratique* the *Coromandel* proceeded direct to London, where the passengers were landed on the 26th inst. It transpired that she had already disembarked some 31 officers and men at Gibraltar for hospital treatment, all suffering from remittent fever, it being considered undesirable to bring these cases too suddenly into a colder climate; but she had on board at the time of her reaching the docks some 30 or more cases still under treatment for remittent fever, 13 of these being more serious than the rest. Prior to being sent on shore these poor fellows were visited in the hospital below deck by the Commander-in-Chief, with his staff. Lord Wolseley, approaching the cots, addressed sympathetic words to each sufferer in succession, inquiring carefully about their homes, friends, and belongings, giving each pale-faced malarial-stricken "Tommy" much encouragement by his earnest and friendly words. Several ambulances from Woolwich were drawn up in the sheds ready to convey the sick to their respective sick quarters. It has been reported to us that *pratique* was refused the *Coromandel* at Portsmouth the day before yesterday on somewhat startling grounds. We are informed that on arrival at that port the *Coromandel* was visited, *not by a medical officer, but by a Customs official*, who, on asking "if they had any sick on board," was immediately answered "Yes, we have several cases of remittent fever and ague." "Then," replied the Customs officer, "I must refuse you *pratique;* if there had been only *ague* I could have passed the ship, but I cannot with *intermittent fever cases on board.*" The source of our information leaves no room to doubt that this curious interview actually took place, otherwise we should have hesitated to give it credence. Where was the medical officer of the port?

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Hospital for Consumption and Diseases of the Throat and Chest.

THE annual meeting was held on the 19th inst. in the Town-hall, the Lord Mayor presiding. The in-patients are received in the hospital at Bowdon, where during last year 226 were treated, as against 256 in 1894 and 277 in 1893. During the year four wards had to be closed some time for necessary cleansing and decoration, which would account for the smaller number of in-patients, but it is feared that want of funds may reduce the number in the future. The report says: "The demands upon the resources of the hospital continue, unfortunately, to exceed the yearly receipts, and the board of management feel that it would be a public calamity if this institution should, through lack of public support, have to close any of its beds against the too numerous applicants for admission." The income from all sources during the year was £3195 5*s.* 8*d.*, and the expenditure £3228 10*s.* 10*d.*, which increased the deficit due to the bank to £1130 11*s.* The conclusion of the report is not without pathos: "With our present income of barely £3200 it is impossible to grant admission to our Bowdon Hospital to more than a small proportion of those who apply, and even to the fortunate few we can only offer a stay of a few weeks in hospital, after which, in almost every case, there is no alternative but to return at once to the old work and to the old unhealthy surroundings; in fact, to just those conditions which are, in the main, the predisposing causes of their malady. With ampler funds at our disposal much might be done in the way of sending to the country and the seaside those whose cases seem to promise a good hope of recovery, and this without adding in any way to our present hospital accommodation." In the report of the medical board attention is called to the prevalence of lung diseases among those who work at trades not necessarily unhealthy, but which become so "by reason of their sedentariness and the unwholesome conditions under which they are carried on." It goes on to show how helpless the workers themselves are as to the improvement of these conditions and that the employers must be looked to if the workrooms are to be rendered "more healthy—or rather, less unhealthy." But, on the other hand, the carelessness, the ignorance, and the prejudices of the workers contribute materially to their own unhealthiness. An effort is made by the authorities of the hospital to spread information about phthisis and its causes, by giving to every patient coming to the out-patient department a leaflet pointing out the need for fresh air and cleanliness, and indicating the precautions to be used as regards sputa, &c. The urgent appeal made for help would surely be generously responded to if, in addition to the personal sufferings of the victims of phthisis, the misery caused by the long-continued illness of the mother or the father of a poor working family could only be realised.

The "Hernia Specialist" again.

In THE LANCET of Dec. 21st last it was stated that a quack named Sherman was sued in the Manchester county court and judgment given against him for £22 and costs for defrauding a man whose hernia he had promised to cure. Another action was brought against him in the county court here on the 19th inst. to recover £22 1*s.* from Samuel John Sherman of 64, Chancery-lane, London. He has now, therefore, sought a wider field than Manchester can offer; but even here he made himself known over a wide area, for in April, 1894, E. Jones, a farm labourer, of Llandegla, near Mold, was attracted by an advertisement in a North Wales paper in which Sherman said he could cure ruptures without operation. Jones came to Manchester and paid Sherman a guinea. "Then Sherman examined him and undertook to cure him for 20 guineas, which the plaintiff paid. After a while the plaintiff lost faith in the defendant and in the virtue of his 'scientific and unique' appliance and the 'curative compound known exclusively to the defendant' and desired to have his money back." Sherman told the plaintiff, to whom he gave "a truss and a bottle of compound," which did no good, that after treatment he would be able "to pitch hay properly." The credulity of these victims is wonderful, or they would not be taken in by "pictures of men who had suffered from rupture" and had been cured. Mr. Whitehead and Mr. Collier were witnesses for the plaintiff, as in the former case. Judgment was given for the plaintiff for the full amount claimed—£22 1*s.*—with costs, including costs of two medical witnesses, and it was directed that there should be immediate execution. Another action was brought against him on the 20th inst. The plaintiff was a farmer from Eastham. The case was very similar to the last, and judgment was given against Sherman for £23 2*s.*, with immediate execution to follow. And on Saturday last at the Manchester assizes an action was brought against him by a lodging-house keeper of Rochdale. In this case Sherman, after getting the preliminary guinea for examination, asked for a fee of a 100 guineas, but finally took 80 guineas, in return for which he gave a truss which was not properly constructed and from which the plaintiff suffered severely, and a bottle of lotion. The jury gave a verdict for the plaintiff for 85 guineas. Quackery, no doubt, pays well, but these repeated actions against him must annoy Mr. Sherman, and may incline him to return to his former business in the States. In the *Manchester City News* of Saturday it is interesting to see a paragraph relating one of these cases tried in the county court, and the following advertisement immediately below:—"Rupture.—Unparalleled success in the treatment of rupture by S. J. Sherman, Hernia Specialist, 64, Chancery-lane, London. Write for his new book of full information, 7½*d.* post free." Until recently he gave an address in King-street, Manchester.

Employer's Liability Case.

This case, decided on the 19th inst., is somewhat interesting, as the question was as to whether the plaintiff's condition was the result of injury or of his previous habits. The plaintiff (Wrigley), a joiner, was working for the defendant (Joy), a contractor, on Oct. 12th, 1894. A beam was being hoisted, and Wrigley was guiding it from below, when the rope broke and the beam caught him on the nose, injuring him somewhat seriously. His face was dressed at the Manchester Infirmary, and he had since been under the care of his own medical man. He told the court that in consequence of the shock he could not now work at any distance from the ground. Mr. H. R. Strange, called for the plaintiff, said he did not think Wrigley would be able to do any high scaffolding work in the future, but admitted that his symptoms "were consistent with those caused by drink, though they had been accelerated and exaggerated by injury." Dr. Baynes and Dr. Thomas Harris said that so far as the medical symptoms were concerned the accident was not responsible, and the former added that when he saw the plaintiff it was almost impossible for anyone to say that he had received any injury. Judge Parry said he was convinced that the plaintiff suffered serious temporary inconvenience from the accident, but the symptoms he now showed were due rather to his mode of living in the past than to the accident. But he added "there had been carelessness on the part of the defendant's foreman, and he would award the plaintiff £15 damages and costs." This seems "a righteous judgment," the sum awarded being no doubt less than it would have been if he had not been unhappily a man "with a past."

Manchester Clinical Hospital for Women and Children.

The Lord Bishop of Manchester took the chair at the annual meeting of the subscribers to the above institution, which was held at the hospital on Friday last. 10,654 new cases had been treated in the out-patient department last year, and 900 in-patients had been received. It is a pleasant novelty to learn that "the annual subscriptions show a slight increase as compared with the previous years." There is still, however, "considerable deficiency shown in the accounts, the actual loss on the year being £598, and the balance owing to the treasurer on Dec. 31st was £701 15*s.*" The Bishop spoke eloquently and sensibly in his appeal for increased support. Mr. Edward Holt has given £1000 to the hospital, to be invested, "and the interest applied to providing better comforts for convalescents." His lordship hoped that this "brilliant example" might be followed by others. Mr. Morton Philips said that the finances were not so bad as would at first appear, as the expenses had been extraordinary; these had been caused chiefly in order to provide much needed laundry conveniences.

More Deaths from Carbolic Acid.

On the 17th inst. a labourer, Robert Fielding, of Bolton, before leaving his home to go to work, "picked up what he thought was a bottle of hop bitters and drank part of the contents," which proved to be carbolic acid. He roused his

wife and then ran to the nearest medical man. "He fell exhausted in the surgery, and died soon afterwards, after acute suffering." This was what is called an accident. On the 21st an inquiry was held as to the cause of death of Annie Walker, aged seventeen, of Hulme, Manchester who, being "troubled in mind," poisoned herself with carbolic acid. The deputy coroner said it was a poison too easily obtained, and he was strongly of opinion that there should be some restriction as to its sale. "Hardly a week passed without a case of carbolic poisoning being dealt with at that court." In yesterday's *Manchester Courier* a case was reported from Wednesbury of the suicide of a married woman, who obtained the acid from a neighbour "ostensibly for the purpose of cleansing a drain." She died, it is said, in ten minutes, in terrible agony. The death-roll is rapidly increasing.

Feb. 25th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Edinburgh Asylum for the Insane.

THE annual meeting of the Corporation of the Royal Edinburgh Asylum for the Insane was held on Feb. 23rd in the City Chambers, Edinburgh, Lord Provost McDonald being in the chair. The annual report of the managers, read by the treasurer of the asylum, Mr. D. Scott-Moncrieff, W.S., stated that the past year had been a most eventful one in the history of the asylum. The opening of the new asylum at Craig House had taken place in the autumn of 1894, but it was not until March, 1895, that the important work of transferring the patients from the old East House Asylum to new Craig House was commenced. The transfer was completed in May, 1895, and the managers were glad to report that it had been effected without a single misadventure. The new asylum fulfilled in all respects the expectations that had been formed of it, and its advantages had been fully appreciated by the medical profession and the general public, applications for admission for new patients having amounted to 80 during the year, or twice the annual average. The daily average number of patients paying high rates of board had increased by 15 since the transfer to the new building, and this increase had been progressive ever since. The boards received for high-class patients during the year amounted to £20,887, against £18,587 for the year 1894, being an increase of £2299. The ordinary revenue for the past year from all sources was £47,634 15*s.* 10*d.*, while the ordinary expenditure, which included an instalment of £1526 towards liquidation of the West House debt and the interest due on Craig House debt, was £47,872 4*s.* 3*d.*, leaving a deficit of £237 8*s.* 5*d.* for the year. The managers pointed out that had they throughout the whole year been in receipt of boards such as were payable at its close there would have been a surplus exceeding the amount of deficit on Craig House, a result which they had confidence in expecting for the current year. The board charged for intermediate patients was £42, and the cost of their maintenance during the year £39 12*s.* 3½*d.* The board charged for patients supported by the parochial authorities was £30, while the cost of their maintenance was £29 14*s.* 0½*d.* The property on which the old East House was situated had been sold in lots for prices amounting in all to £14,850. The adoption of the report was moved by the Lord Provost and seconded by Sir John Cowan of Beeslack. Mr. James Howden, C.A., was appointed to succeed on the board of management Mr. J. R. Findlay, who retired by rotation. Mr. Richard Clark, chairman of the city parish council, was appointed to represent that body on the board. In the absence of Dr. Clouston, Dr. Middlemass read the report of the physician-superintendent. It stated that the total number of patients treated during the year had been 1292 and the average number of patients resident 882, of whom 438 were men and 444 women. The discharges were 302, of whom 157 were men and 145 women, while the admissions were 410, of whom 138 were men and 222 women. There had died during the year 96 patients, of whom 54 were men and 42 women. It was a striking thing that 80 of the admissions had been into the new Craig House, whereas the average yearly admissions into the now abandoned East House for the five years previously had been only 42·6. Already the number of patients in Craig House was mounting up so rapidly that in another year, with the same rate of admission, its capacity would be almost reached. The number of recoveries in Craig House was greater than had ever been the case in the East House. Twelve of the patients admitted to Craig House came there voluntarily, a larger number of voluntary patients than they had ever had before. The causes of mental disease among the patients presented no very striking or novel features. Out of 89 cases in which the brain and mind had been upset by mental causes 80 per cent. were from "mental worry," "domestic troubles," "sorrow," "shock," "love affairs," "adverse circumstances," "too solitary life," "religious excitement," while only 17 were from "overwork," showing that it was not work, but worry, that killed. Of the physical causes intemperance headed the list with 87 victims. There were 15 cases the result of influenza; 45 cases had paralysis and brain softening on admission. There were 170 recoveries, or a percentage of 41·2 on the admissions, which was above the average. He was glad to say that the effect of the transfer on the patients was without exception either good or in no way harmful. The patients were on the whole much more contented in the new house than in the old, and many expressed very strong opinions in favour of the new arrangements. The cheerfulness of effect was more marked, the space greater, the air more bracing, and beauty both inside and outside more striking. The electric light contributed much to the cheerfulness. He felt that he had at his command almost ideal conditions of treatment for his patients at Craig House. The report, in conclusion, referred to negotiations going on between their managers and the city parish council, which he hoped would result in enabling them to put an end to the crowding of the rate-paid wards, and would remove the difficulty they experienced in admitting all the poorer patients who applied for admission. A vote of thanks to the Lord Provost for presiding terminated the proceedings.

The Morison Lectures.

On Friday Dr. Bruce devoted his lecture to the auditory nerve and its connexions. He showed its relations to the cerebellum and other parts, and the part played by these in maintaining equilibrium and controlling the lateral movements of the eyes. On Tuesday he delivered the sixth and last lecture, in which he dealt with the roots of the fifth, fourth, and third cranial nerves, and concluded with a survey of the origin, course, and termination of the fillet. The lectures have been well attended, and the lecturer has shown an intimate acquaintance with his subject, the result of long, laborious, and industrious work at this interesting and complex department of anatomy.

Appointment of Examiners in Clinical Surgery in the Edinburgh University.

At the meeting of the Edinburgh University Court held last week Dr. John Duncan, Mr. J. M. Cotterill, M.B., C.M., and Dr. Frederick Page of Newcastle-upon-Tyne were appointed Examiners in Clinical Surgery for a period of four years.

Professor Clifford Allbutt in Edinburgh.

Professor Clifford Allbutt, F.R.S., delivered a lecture to the Royal Scottish Geographical Society in Edinburgh on Thursday of last week. His theme was "Ancient Trade." The meeting was well attended and was presided over by Sir Thomas Clark, Bart.

Lord Rectorship of the Edinburgh University.

Mr. R. B. Haldane, Q.C., M.P., has accepted the invitation of the Edinburgh University Liberal Association to stand as Liberal candidate at the Rectorial election in November next. The Unionist candidate is not yet known.

Royal Hospital for Sick Children, Aberdeen.

The annual meeting was held on Monday. During 1895 there were 653 cases treated in the hospital, of which 548 came from the city. The total income last year was £2327, and there was a net deficit of £305, notwithstanding the cheapness of management. The public are appealed to for increased support. For ordinary cases there are now sixty beds and for infectious cases eighteen.

Aberdeen General Dispensary.

During 1895 the number of ordinary and zymotic cases was 8230. Out-door midwifery cases numbered 210, and 60 were treated in the Maternity Hospital; 36,209 prescriptions were dispensed, and there were 386 vaccinations. The year's accounts show a balance to the good of £84 on the General Dispensary, there being a deficit of £149 on the lying-in hospital.

Agricultural Classes at the University of Aberdeen.

The Joint Committee on Agricultural Education in connexion with the University of Aberdeen have decided to join in a representation to Government to increase the grant for Scotland. There are nineteen students attending Mr. Wilson's class on agriculture and rural economy. A selection of two has been made from the applications for the lectureship on agricultural chemistry—viz., Mr. Charles M. Luxmore, D.Sc. Lond., F.I.C., Lecturer on Agricultural Chemistry to the Hertford County Council, and Mr. James Hendrick, B.Sc. Lond., F.I.C., Lecturer on Agricultural Chemistry at the Glasgow and West of Scotland College, Glasgow. The appointment will be made on March 6th.

Glasgow University.

The University Court has made the following appointments: John Yule Mackay, M.D., University College, Dundee, to be Examiner in Anatomy; Samuel Sloan, M.D., to be additional Examiner in Midwifery; T. Kennedy Dalziel to be additional Examiner in Medical Jurisprudence; and A. C. Seward, M.A., University Botanical Laboratory, Cambridge, to be additional examiner in botany. Each appointment is for a period of four years.

Ayr County Hospital.

The annual meeting of the subscribers was held on the 14th inst. The report showed a satisfactory condition of the institution both from a medical and financial point of view, and it was unanimously adopted. It was also agreed to record a special vote of thanks to Provost Goudie, who has for twenty-three years been one of the directors of the hospital and who now retires.

Royal Infirmary, Glasgow.

The wards of the infirmary have for some time been so full that in order to prevent disappointment and possible hardship, especially to those coming from a distance, the managers have issued an intimation indicating that it is advisable that inquiries be made at the hospital before the patient actually presents himself. Of course this does not refer to accidents or other cases of urgency.

Eastern Medical Society, Glasgow.

This newly formed medical society has displayed a considerable amount of vitality and enterprise ever since its foundation. The meeting on the 12th inst. was devoted to a discussion on Rheumatoid Arthritis, the discussion being introduced by a paper by Mr. Armstrong of Buxton. Mr. Armstrong reviewed the history of the disease and traced its differentiation both from gout and chronic rheumatism; in his opinion the dystrophic theory was the one which fitted the facts best, and he classified the cases according to the source of the irritation, by the action of which the trophic disturbance was produced. He strongly advocated a tonic line of treatment, and deprecated the use of alkalies, salicylates, and other depressant agents; baths, and especially the galvanic bath, he had found of great value. In the subsequent discussion Dr. Alexander Robertson, Dr. Ebenezer Duncan, Dr. C. O. Hawthorne, and Dr. Wallace Anderson took part. A general agreement was expressed with the treatment recommended by Mr. Armstrong, but some difference of opinion was manifested in regard to the separation of rheumatoid arthritis from ordinary chronic rheumatism. Dr. Hawthorne showed photographs and drawings of a case in which, together with evidences of rheumatoid arthritis, a number of subcutaneous tumours had developed, and one of these on removal was found to consist of fibrous tissue. He remarked upon the significance of such tumours as bearing upon the rheumatic nature of rheumatoid arthritis, and quoted the marked benefit which many of the patients experience from full doses of sodium salicylate as evidence in the same direction. Dr. Wallace Anderson had also reported a case of rheumatoid arthritis with subcutaneous tumours, and urged that such cases must be carefully considered in framing a theory of the disease. The chair was taken by Dr. Patrick, the President of the society.

Medical Resignations.

Dr. M'Gill, medical officer to the Glasgow police force, has sent in his resignation after a period of service extending over forty years. The resignation by Dr. W. L. Reid of the Chair of Midwifery in Anderson's College Medical School is intimated.

Typhus Fever in Glasgow.

The medical officer of health reports that since November last typhus fever has been continuously present in the city. At present 25 cases are in hospital and some 45 persons are under observation on account of their association with these cases. The great majority of the cases come from a particular district of the city notorious for the practice of overcrowding, and the report suggests that the police penalties for this practice might be more energetically enforced in the public welfare.

Greenock Infirmary.

The annual general meeting was held on the 21st inst. The report shows that during the past year the number of in-door cases admitted was 1137, and of out-door patients there were 4300. Like many similar institutions, the infirmary has to lament the lack of funds and the deficiency of the ordinary income to meet the ordinary expenditure. Sir M. Shaw Stewart will next year complete his fiftieth year as president of the infirmary.

Leith Hospital.

The following appointments have been made to the medical staff of the Leith Hospital: Dr. H. G. Langwill, M.R.C.P.Edin. (from the dispensary department), to be one of the physicians; Mr. Alexander Miles, M.D., F.R.C.S. Edin., to be one of the surgeons; Dr. David Berry Hart, F.R.C.P. Edin. and lecturer on midwifery and diseases of women, to be physician for diseases peculiar to women; Dr. W. G. Sym, F.R.C.S.Edin., to be ophthalmic surgeon; Dr. Theodore Shennan to be pathologist; and Dr. George Elder, Dr. J. S. Fowler, and Dr. A. Scot Skirving to be medical officers in the dispensary department.

Feb. 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Assimilation of the Irish Poor-law with that of England.

NOTICE of a paper by Dr. W. Dickson, which appeared in the *Dublin Journal of Medical Science*, suggesting an alteration of the law by which ladies might be elected on the boards of Poor-law guardians in Ireland as they were in England, and containing many arguments in favour of such a change, appeared in THE LANCET many months ago. A Bill with this object was recently brought before Parliament by Mr. W. Johnston, and, notwithstanding the opposition of a small contingent of members from Ireland, passed its second reading with a majority of 264. The change will be welcomed in Ireland, where it is generally recognised that on occasions when questions connected with the food and clothing of the women and children, who constitute the bulk of the pauper inmates, are being considered the advice of a woman might frequently prove of great service. At a meeting of the North Dublin Union on the 20th inst. a resolution was passed strongly approving of the measure.

The Athlone Guardians' Suspension.

The Athlone board of guardians, who, it will be remembered, were dismissed by a sealed order of the Local Government Board on account of their refusal to provide a trained night nurse for the infirmary, are to be restored in about a month. In reply to a question in the House of Commons Mr. Gerald Balfour stated recently that the vice-guardians temporarily appointed by the Local Government Board would cease to hold office on March 25th next, and that the usual steps would be taken for the election of a board of guardians for the union on that date.

The Election of Direct Representative on the General Medical Council for Ireland.

The voting for a direct Irish representative on the General Medical Council, which has been going on since the 20th, will close on the 27th, and it is hoped in the provinces that the head of the profession in Belfast, Professor Cuming, will be elected. The members of the profession in Cork have issued a very strong circular in support of Professor Cuming, in which they say that there are 2350 registered practitioners in Ireland, and only 350 of them reside in Dublin, yet Dublin manages to absorb nearly all medical appointments of emolument and honour. As instances they give the fact that of the 28 paid medical examiners in the Royal University of Ireland, where medical students from all parts of the country present themselves for examination, 15 examiners—that is to say, more than one-half the total number—are selected from

the 350 Dublin practitioners, while the 2000 medical practitioners of the provinces are represented by only 13 examiners. They ask, Is this fair or just? Again, the same treatment is measured out to the provinces in regard to the General Medical Council. Ireland sends 7 representatives; 5 of these are appointed by the licensing bodies, and 1 by the Crown. These 6 are all selected from the 350 Dublin men, the other—the direct representative—has been hitherto a Dublin nominee; and the Cork medical men in this circular appeal to the provincial practitioners of Ireland to insist that at least this one direct representative shall be a provincial man ready to safeguard provincial interests. Professor Cuming is the only provincial candidate, and the Cork practitioners are appealing to the registered medical practitioners of the South of Ireland to support him.

The New Photography.

At a meeting of the Ulster Amateur Photographic Society Dr. Cecil Shaw gave a very interesting lecture on Feb. 24th on the recent discoveries of Professor Roentgen. A variety of illustrative radiographs were shown, among them being the hand of a person who, while at revolver practice, shot himself through the little finger, and the hand of a former house-surgeon in the Royal Hospital who suffered from blood-poisoning. The changes produced by the disease on the hand were well seen.

The Belfast Royal Hospital.

At the quarterly meeting, held on Feb. 24th, it was reported that during the past three months 438 patients were treated in the wards and 5005 in the extern department. Special reference was made to the loss sustained by the hospital in the death of Dr. Ross. At the end of January there was a balance against the hospital of £901 15*s.* 10*d.*

Banquet given by the President of the Ulster Medical Society.

On Tuesday, Feb. 18th, Professor Sinclair (President of the Ulster Medical Society) entertained the members of the medical profession at a banquet in the Grand Central Hotel, Belfast. Covers were laid for between sixty and seventy guests, and amongst them were the President of Queen's College, the Registrar (Professor John Purser, D.Sc.), and Professor S. Dice, M.A. Dr. Lindsay, Dr. Mackenzie, Dr. McKisack, Dr. McCaw, and Dr. Leslie contributed the musical selections, while Dr. Morrow recited some of Rudyard Kipling's poems. The evening was an extremely pleasant one, and at the conclusion the health of the President and host was proposed by Mr. John Fagan, F.R.C.S.I. Professor Sinclair suitably replied.

Tuberculosis in Cattle.

At a meeting of the Chemico-Agricultural Society of Ulster, held in Belfast on Feb. 21st, Dr. Lorrain Smith (lecturer on Pathology at Queen's College) gave a very interesting and practical lecture on "Tuberculosis in Cattle."

The Battle of the Clubs at Cork.

The situation between the clubs and the profession is maintained with a serene tranquillity which was hardly to be expected. Leading articles in the newspapers condemning the action of the medical men, vituperative letters in the same place from well-to-do club patients, denunciations from the platform, are all now things of the past. One of the most energetic club orators, who but a few months ago was the recipient of a purse of sovereigns from his admirers, has tendered his resignation as district secretary of the Oddfellows' lodges, and his brother Oddfellows have accepted his resignation, despite their past acute appreciation of his services. Can it be that the club members felt that he had led them into a tight place, from which they would gladly retreat if circumstances, from their point of view, were a little more favourable for a *volte-face?* The connexion of one of the new club medical officers with one of the clubs has been severed, and informal communications have passed between some members of the club and the secretary to the local profession. Everything shows that the upheaval against insolent tyranny has narrowed the fields of selection for the clubs. Club medical officers, at least in Cork, cannot be exchanged with the same facility as cast-off garments, for the position offered has not sufficient charms. One of the Cork clubs has, it is true, and by a narrow majority, increased the pay of their surgeon from 6*s.* 6*d.* to 10*s.* per family per annum, showing that the imported members of the faculty are teaching the clubs the same lesson as their previous officers.

Feb. 25th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Poisoning by Carbonic Oxide.

READERS of French newspapers are familiar with the method adopted by despairing lovers and starving *ménages* to put an end to their days. A *réchaud* is lighted, all ingress of air into the room is prevented, and the poor wretches are found dead in bed when the doors are opened, the toxic agent having been carbonic oxide. Occasionally, however, a medical man is called before life is extinct, and as no time is to be lost in recalling animation it is as well that practitioners be made aware of the most effectual means, according to M. Gréhaut,[1] of neutralising the lethal properties of the gas. Experimenting in his laboratory he found that the administration of a mixture of nine litres of air and one litre of carbonic oxide stopped the respirations of a dog in less than one minute. The following remedial means were immediately and simultaneously employed—viz., artificial respiration, rhythmic traction of the tongue, and intermittent insufflation of oxygen gas. After the lapse of a few minutes the animal began to breathe and recovery quickly ensued. The best treatment of this condition would, then, appear to be a combination of these three methods. It must not be forgotten that the almost universal use of slow combustion stoves in this city occasions numerous accidents every winter from this cause. Movable stoves are still in universal use notwithstanding the frequent warning issued by the Academy of Medicine, and unthinking people will sometimes sleep in a hermetically sealed room in which such a stove is burning.

The Influence of Forests on Death-rates and Birth-rates.

This important question has been recently investigated by M. Jeannel.[2] It would appear that a process of gradual wood denudation has been going on in certain departments, and that this process has been attended by serious inconvenience from a geological, meteorological, and sanitary point of view. Censuses taken since 1871 show that in the thirty deforested departments there has been a progressive diminution in the birth-rate. Between the years 1886 and 1891 these same departments incurred a serious loss of population as represented by an excess of 89,682 deaths over births. The mortality in these departments was nine times greater than in the rest of France. This, then, would seem to be a not inconsiderable factor in the depopulation of the country, and M. Jeannel calls upon the authorities to eliminate it as speedily as possible.

The Madagascar Campaign and the Soldier's Portable Surgical Dressings.

A Ministerial decision renders it obligatory on each soldier to carry during a campaign a packet of surgical dressings in the lining of his hood. A first application was made of this regulation in the Madagascar "walk-over." Being desirous of discovering how these *paquets individuels de pansement* had stood the wear and tear of the expedition, two military surgeons, M. Batille and M. Chavigny, passed a certain number of them under inspection on the return of the troops. Many packets were found deteriorated by pressure and contact with water, only five out of the entire number being well-preserved. Fragments of the various components of each packet—gauze, bandages, wool, &c.—were sown on bouillon, with the result that the medium remained sterile. The dressings had therefore maintained their asepticity. Fragments of the dressing materials were again sown on bouillon, together with a few drops of the drinking-water supplied to Perpignan—a fairly pure water—and the result was once more negative, proving that the wool, gauze, &c. had retained their antiseptic properties. The quantity of sublimate incorporated with the dressing material was, in fact, found to be almost undiminished. But the salt had abandoned the centre of the packet in great measure, the periphery being richer in sublimate than the gauze and wool in the middle. This phenomenon might have the effect of robbing these materials of much of their virtues, and it is suggested that the inconvenience be remedied by impregnating a larger quantity of perchloride into them before they are distributed amongst the troops.

It is always a pleasure to note examples of longevity

[1] Société de Biologie, Feb. 14th, 1896.
[2] Académie de Médecine, Feb. 11th, 1896.

amongst members of our profession. The death is reported at Saint-Bonnet-la-Rivière of Dr. Étienne Fougeras-Lavergnolle at the age of ninety-five.

Feb. 25th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Presence of Iodine in the Human Body.

PROFESSOR BAUMANN of Freiburg in Baden has recently found that iodine is one of the normal constituents of the human body, being present in the thyroid gland in a compound which contains 9·3 per cent. of iodine. He has given the name of "thyro-iodin" to this substance, and has found it also in the thyroid glands of pigs and sheep, but not in those of cattle. Professor Kocher of Berne suggested some time ago that the efficacy of the thyroid extract treatment of goitre might depend on the presence of iodine, but the chemical researches made in Berne failed to detect it. This hypothesis, however, is now confirmed by Professor Baumann's discovery, which is, moreover, of great theoretical interest.

Visiting of Hospital Patients by their Friends.

In most of the Berlin hospitals the patients are allowed to be visited by their friends for one or two hours on two or three stated days of each week. Not long ago a patient died before his relatives were admitted to see him, and this unfortunate circumstance has induced the lay press to urge the advisability of daily visits being allowed. Hospital managers and physicians in those towns where this system is already in force have been interviewed, and all without exception declared themselves to be satisfied with it. Professor Nothnagel of Vienna was very emphatic in saying that it was a mere compliance with the dictates of humanity to admit the patients' friends on any day, and, speaking as a physician, he declared that to be debarred from communication with his family might have an unfavourable influence on a sick person. The municipal hospital board recently discussed this matter at one of its meetings, and, contrary to general expectation, it rejected the proposed innovation. The reasons assigned for this decision are that visitors bring prohibited food and beverages into the hospital, and a system of daily visiting would increase the opportunities for such irregularities. Moreover, the noise produced in a hospital ward by so much coming and going is said to disturb the patients. In the *Deutsche Medicinische Wochenschrift* this decision is vigorously attacked by a former hospital physician, who states that, according to his experience, the evils complained of are practically non-existent, and he adds sarcastically that if the hospital boards would provide a less monotonous diet the visitors would be under no inducement to bring articles of food into the wards. It is very probable that the board will change its policy when any convenient opportunity presents itself.

Tuberculosis in Parrots.

Parrots seem to be very liable to tuberculosis—so much so, indeed, that of 154 parrots treated in the Veterinary Institute of Berlin 56 (equal to 36 per cent.) showed tuberculous symptoms. As the tuberculosis of these birds is caused by a species of Koch's bacillus it is possible that the disease may be transmitted to their owners or other persons. Dr. Braatz, while attending a patient suffering from tuberculosis, observed that the parrot in the house was ailing, and as examination by a veterinary surgeon proved that it was the subject of tubercle he directs attention to the possibility of tuberculous disease being acquired from these domestic pets.

Strike of Tailors in Berlin.

The strike in the tailoring trade to which allusion was made in THE LANCET of Feb. 15th (p. 436) soon came to an end through the mediation of the president of the Trades' Council. A general increase of wages has been obtained by the strikers, but the hygienic surroundings of this trade will remain as bad as before, for the masters will continue to employ middlemen, and clothing will, as a rule, be made by home-workers. Among their requirements the strikers included the providing of workshops, but this claim has now been abandoned. It is probable that the Government will propose an alteration of the law in order that the existing system of factory inspection may be extended to home industries.

Feb. 25th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Relief of the Wounded in War.

A STORY has passed from continental journals into the British press, including some of your professional contemporaries, that M. Henri Dunant, "founder of the Red Cross Society," is, in spite of his great "service to mankind," living "forgotten by all in the Hospice of Heiden" in Switzerland, and on the strength of this a highly emotional appeal has been addressed to the charitable to "make what remains to him of life more comfortable." No doubt M. Henri Dunant is a fitting object of charity if only for what he did in promoting the movement that culminated in the Red Cross organisation; but to say that that movement began with him, and that the Geneva Convention was concluded "thanks to his tireless efforts," does not square with the facts, as these, once and again, have been placed before the readers of THE LANCET. It so happens that fresh interest attaches to the subject by the recent publication of a very able book, "Sulla Neutralità dei Feriti in Guerra e sul Soccorso immediato ed illimitato per essi" ("On the Neutrality of the Wounded in War, and on their Immediate and Unconditional Relief"), by the professor of clinical surgery in our university, a work which has already had a wide circulation and has procured for its author from the King of Italy the Badge of Cavaliere of the Order of SS. Maurice and Lazarus. Dr. Gaetano Mazzoni (the professor and author in question) enters minutely into the whole history of the movement, and confirms what your readers are already aware of—that the real founder of the Red Cross Association was the Neapolitan surgeon, Ferdinand Palasciano, in whose honour a few weeks ago a monument was erected in his native city. M. Henri Dunant, it is said, was present at the battle of Solferino on June 24th, 1859, and was so sickened by the horrors witnessed after that sanguinary engagement that he appealed to the nations to coöperate for the protection of the sick and wounded in war. But full ten years earlier, at the bombardment of Messina by King Ferdinand in 1848, young Palasciano, a surgeon then attached to the Liberal cause, though serving under the Bourbon, refused to distinguish between the wounded of either side on the ground that the healing art recognises no nationalities, and for his uncompromising assertion of the principle narrowly escaped being shot by the Neapolitan General Filangieri, and was condemned instead to a year's imprisonment at Reggio di Calabria. Released from durance, which he had beguiled by putting on paper his ideas as to the non-distinction between belligerent wounded so far as medical relief is concerned, he continued by speech and pen to agitate for such neutrality, calling the attention of the diplomatists, statesmen, and surgeons-general of Europe to the necessity of its practical recognition, particularly under the increasingly destructive conditions of modern warfare. His great opportunity next came in the struggle for Italian independence (1859–60), in the later months of which he was director of the Ospedale di San Sebastiano in Naples, and received a gold medal for his gratuitous services to the wounded. In April, 1861, he offered a considerable sum to be awarded by the Accademia Pontaniana di Napoli for "A Hundred Aphorisms on the Treatment of Wounds caused by Weapons of Precision," an occasion which drew from him a discourse in which he reasserted the proposition he had for twelve years maintained, that "the belligerent powers, on the declaration of war, should reciprocally recognise the principle of the neutrality of the combatants, whether wounded or seriously ailing, throughout the whole period of treatment, and that they should respectively adopt the practice of an unconditional, that is, non-national, augmentation of the medical *personnel* during the entire duration of hostilities." Fully alive to the difficulties of his scheme he endeavoured to enlist the coöperation, or at least the sympathies, of King Victor Emanuel and the Emperor Napoleon, by which time his crusade had begun the tour of the Continent. An officer in the commissariat of the French army next took up the theme on June 10th, 1861, insisting on the "inviolability of the army medical staff, the attendants, and the ambulances"; and then M. Appia, a surgeon of Geneva, in conjunction with M. Dunant, then a banker of the same city, conceived the project of founding, on the lines indicated by Palasciano

(for whose prize, renewed by the Accademia Pontaniana, M. Appia was a competitor), a philanthropic society, universal in its application, with its headquarters at Geneva. Out of this grew the Convention of 1864, revised in 1868, on which latter, to the surprise of many, Palasciano was not invited to sit. His exclusion was commented on by the *Journal de Genève* (Sept. 8th, 1868) as, wittingly or unwittingly, a slight on the man "who was the first to demand the neutralisation of the wounded on the battlefield," and whose project "was the only one destined to bring this humanitarian principle into the order of civilised procedure." Equal injustice was afterwards shown him when no mention was made of his reforms in the "servizio sanitario" in time of war. These, which have assured to the ailing and the wounded the assistance now open to them, "con la partecipazione obbligatoria di tutti i medici e chirurgi ai quadri dell' Esercito e della Marina," sprang from a Royal Commission of which he was president, and were embodied in a decree countersigned on Feb. 21st, 1878, by Agostino Bertani, Pietro Cocconi, Guido Baccelli, and Colonel Manayra, M.D., Colonel Arena-Macelli, M.D., and Colonel Mantese, M.D. These facts, and many more, collected by Professor Gaetano Mazzoni, combine to vindicate for the Red Cross organisation its veritable parentage in Ferdinand Palasciano and reduce the claims so recently advanced for the undoubtedly meritorious M. Henri Dunant to nothing more than the effective promotion of a movement which had already been conceived and planned by the Neapolitan surgeon and clinician.

Feb. 22nd.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Harvard Medical College.

THE medical school is highly prosperous as regards the number of students, but, owing to the additional instruction required by the new fourth year in the course for the medical degree and to the great development of costly laboratory instruction, the income of the school has for two years fallen short of its expenses. The school has taken an active part in developing the new bacteriological methods by which diphtheria may be distinguished from other throat affections of similar appearance. The importance of the summer courses and the graduate courses given by the school gradually increases. Early in the year the faculty voted to admit women graduates in medicine to the graduate course of the school at the discretion of the several instructors in charge of such courses, provided that the rules of the hospitals in which clinical instruction is given be observed.

Against High Buildings.

The enormous height of the more recent buildings in New York (twenty-five storeys) is beginning to excite public alarm. The Chamber of Commerce has issued a vigorous protest against them. A committee to whom was referred the question if in their judgment the construction of buildings in this city without limit as to height and without reference to width of the streets is consistent with the public health and welfare, report that after consultation with many of the best known experts the committee have come to the conclusion that, in their judgment, such construction of buildings without limit as to height and without regard as to width of streets is not consistent with public health, and that the interests of a majority of our citizens require that the height should be limited. It appears evident that the health of the occupants of their own lower floors as well as of the lower floors in neighbouring houses must suffer for want of proper ventilation and sunlight. These evils would become aggravated, the eyesight of tenants would suffer by the compulsory use of artificial light, and their health by dampness and other unhealthy conditions if the number of tall buildings should materially increase. The safety of buildings adapted for offices may become impaired by weight of merchandise or vibration of machinery when the owners cease to find them profitable for offices and allow them to be used for mercantile or manufacturing purposes contrary to law. The Taylor building on Park-place, once considered fireproof, collapsed about four years ago, burying sixty workmen in its ruins, in consequence of the weight of some machinery which had been placed in it. It is said of some large buildings in New York which for some years have been popular for offices on account of superior light and ventilation that owners intend to adapt them for other purposes since the light has been diminished by taller buildings opposite.

The Tramp Nuisance.

The Chief of Police of New York has recently reported on the tramp nuisance. It appears that, on the urgent recommendation of the Chief, the Police Commisioners are about to forbid the lodging of tramps in the station-houses. He states that their number fell under the hostile attitude assumed by the police since 1893 from 127,503 in that year to 68,025 in 1894 and 65,556 last year—that is, from a nightly average of 400 the year round to 200 and below. As a matter of fact, the number is of course much larger in the winter than in the summer months. It is the women lodgers that remain then. The men are out foraging the country. Thus in January, a year ago, 1148 men and 535 women lodgers slept in the Oak-street Station. In August there was only one male lodger to 484 women. In December, 1895, again, the number had risen to 1154 men and 654 women. Night after night foul hordes of tramps are herded together here in rags that have often not left their bodies since they were put on and never will till they drop off. They sleep on hard boards, huddled together, hungry as they came in, and go out in the morning hungry, to beg their way from door to door, scattering seeds of contagion and disease through the city. The Board of Surgeons is of the opinion that it would be recreant to its duty did it not strenuously urge upon the Board of Police the propriety, the economy, nay, the absolute necessity, of discontinuing the practice of using station-houses as lodgings for vagrants. The practice is fraught with numerous evils; the huddling together like cattle of drunken, dirty, and ofttimes diseased wretches contaminates the air breathed by patrolmen in the same building; it spreads typhoid fever and other diseases, and is a prolific and traceable source of sickness among the officers and men.

Rank of Graduates of the Medical Colleges of New York.

The Regents of the State of New York report that an analysis of the result of licensing examinations shows that the Woman's Medical College of the New York Infirmary stands at the head of the list, with the College of Physicians and Surgeons holding second place. Since these examinations were begun only one graduate of the Woman's College of the New York Infirmary failed to pass.

New York as a Medical Centre.

It is easy to show that New York is the leading State in matters pertaining to higher medical education. Since 1892 there has been a growth of about 700 in the number of medical students and of more than 400 in the number of medical students from other States and countries who have come to study in New York institutions. There has been an increase of over 500 per cent. in the number of post-graduates. The sum invested in medical schools increased from $2,764,530 in 1891 to $4,061,293 in 1895, and the amount of money expended for medical education increased from $365,405 in 1891 to $697,653 in 1895.

Feb. 14th.

DIPHTHERIA IN LONDON.—The number of deaths registered in London from diphtheria in the week ended Feb. 15th—namely, 45—was distinctly lower than in several earlier weeks, although in excess of the decennial average for the seventh week of the years 1886-95 by 12. It showed considerable reduction, however, from the 51, 61, and 63 deaths registered in the three preceding weeks. Of the 45 deaths, all but 2 were in young persons aged under twenty years. In Kensington and Greenwich there occurred 5 deaths each, and in Paddington and Islington 4 each. During the week the admissions to hospital were 97, as against 122, 102, and 94 in earlier weeks. The patients remaining in hospital at the close of the week were 712 in number, as compared with 689 and 658 at the close of the corresponding weeks of the two preceding months. Last week the registered deaths rose to 48, and were 16 in excess of the decennial average for the particular week. Camberwell was credited with 6 and Lambeth with 4 of the deaths. All but 2 of the 48 deaths were again in young persons aged under twenty years. The admissions in the week were 108, and 713 patients remained under treatment on Saturday last. In the two weeks here treated of there were 23 deaths registered from diphtheria in Greater London, and of these 6 occurred in the West Ham district.

Medical News.

UNIVERSITY OF LONDON.—The following candidates passed the Intermediate Examination in Medicine, January, 1896:—

ENTIRE EXAMINATION.

SECOND DIVISION.

Alexander, Kenneth Bush, Guy's Hospital.
Anderson, William Maurice, London Hospital.
Balderston, Robert, Guy's Hospital.
Barron, Henry Thompson, Westminster Hospital.
Belfrage, Sydney Henning, University College.
Briscoe, John Charlton, King's College.
Cammidge, Percy John, St. Bartholomew's Hospital.
Clifford, Harold, University College.
Collens, Edward Howard, Mason College.
Eason, Herbert Lightfoot, Guy's Hospital.
Fairbank, Harold Arthur Thomas, Charing-cross Hospital.
Forster, Lucinda C. Emily, London School of Medicine for Women.
Glover, John Abel, Guy's Hospital.
Kelly, Charles Ernest M., Owens College and St. Bartholomew's Hospital.
Knight, Charles Voughton, St. Bartholomew's Hospital.
Lander, Charles Llewellyn, B.Sc., London Hospital.
Lewis, Frank Charles, St. Mary's Hospital.
Meakin, Ethilda Budgett M., London School of Medicine for Women.
Norman, Ralph, London Hospital.
Perdrau, Joseph Arthur, University College.
Utley, Charles Joseph, Owens College.
Watson, James Vincent, Owens College.

EXCLUDING PHYSIOLOGY.

FIRST DIVISION.

Gates, Edward Alfred, St. Thomas's Hospital.

SECOND DIVISION.

Barlow, Herbert Cecil, Westminster Hospital.
Bingham, Sydney Oliphant, St. Thomas's Hospital.
Cheesman, Herbert Hilton, Westminster Hospital.
Everington, Herbert Devas, St. Bartholomew's Hospital.
Fox, Herewald Evelyn Croker, Guy's Hospital.
Fox, Thomas Heber, Yorkshire College.
Gibbins, Herbert Bowly, St. Bartholomew's Hospital.
Hanson, Helen Beatrice, London School of Medicine for Women.
Hatfield, Ronald, St. Bartholomew's Hospital.
Thotson, Edward Cecil Brearey, Guy's Hospital.
Liddel, William Henry Singer, St. Mary's Hospital.
Longley, John Augustus Noel, Mason College.
Owsley, George Chetwode, Guy's Hospital.
Parrett, Edward Erratt, B.A., Guy's Hospital.
Parsons, Allan Chilcott, St. Thomas's Hospital.
Rhodes, James Herbert, St. Bartholomew's Hospital.
Richards, George Maurice Oswald, Owens College.
Robinson, John Elliott, St. Bartholomew's Hospital.
Rowland, Penry William, St. Bartholomew's Hospital.
Taunton, John Godfrey Creswell, Mason College.
Tayler, George Padgett, St. Bartholomew's Hospital.
Taylor, Isaac, Yorkshire College.
Miller, George Valentine, University College.

PHYSIOLOGY ONLY.

FIRST DIVISION.

Aveline, Henry Talbot Sydney, Bristol Medical School.
Wallis, James Garfit, London Hospital.

SECOND DIVISION.

Beit, Francis Victor Owen, St. Bartholomew's Hospital.
Crisp, George Bedford, St. Mary's Hospital.
Gunther, Hermann Arthur, University College.
Handson, Lionel Edwin Charles, Guy's Hospital.
Jones, John Llewellyn, University College.
Northcote, Percy, St. Thomas's Hospital.
Rowe, William Trethowan, St. Bartholomew's Hospital.
Scott, Henry Harold, St. Thomas's Hospital.
Stock, William Stuart Vernon, University College, Bristol.
Stuart, Walter Lea, Guy's Hospital.
Thwaites, Gilbert Bahn, St. Thomas's Hospital.
Woodbridge, Elliot Wilson, St. Bartholomew's Hospital.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed the examinations in February, 1896:—

Surgery.—W. P. Bean, Leeds; R. D. Dobie, King's College Hospital; H. W. Graham, Guy's Hospital; E. M. Henwood, Royal Free Hospital; M. K. S. Holst, Royal Free Hospital; R. B. Jones, Liverpool; W. R. Kemp, Cambridge and St. Mary's Hospital; W. A. Kidd, Liverpool; and A. C. Thornton, St. Thomas's Hospital.

Medicine, Forensic Medicine, and Midwifery.—J. H. Busteed, Guy's Hospital; H. C. F. Dalton, Charing-cross Hospital; A. G. Everard, Charing-cross Hospital; F. J. Gaine, Cambridge and St. Mary's Hospital; L. Hogg, McGill University; H. R. Hurry, Melbourne; W. A. Kidd, Liverpool; E. A. McAnally, St. George's Hospital; J. R. McKinlay, Westminster Hospital; R. H. Ormsby, Westminster Hospital; F. E. Rimer, McGill University; and G. A. Simpson, London Hospital.

Forensic Medicine and Midwifery.—J. Ponsonby, Guy's Hospital; G. R. Smith, Manchester; and C. H. Thomas, London Hospital.

Medicine and Forensic Medicine.—C. H. Dearden, Leeds; and C. H. Nicholson, Middlesex Hospital.

Medicine.—A. P. Eldred, St. Mary's Hospital.

Forensic Medicine.—F. R. Baker, London Hospital; and A. J. Pedley, Birmingham.

Midwifery.—F. E. Bromley, London Hospital; P. H. Collingwood, St. Thomas's Hospital; E. C. Hort, Cambridge and Guy's Hospital; and F. E. Saunders, Cambridge and St. Thomas's Hospital.

To Messrs. Baker, Bromley, Busteed, Dalton, Eldred, Gaine, Jones, Kidd, Rimer, Simpson, and Thornton was granted the diploma of the Society entitling them to practise Medicine, Surgery, and Midwifery.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION.—The following gentlemen have passed the primary part of the examination:—Mervyn Winfred Falkner and Percy Hope Falkner.—The following gentlemen having passed the necessary examination have been admitted Fellows of the College:—Bernard Robert Chatterton, Patrick Joseph Fagan, Edward Henry Taylor, and Alfred Ernest William Ramsbottom.

MACCLESFIELD GENERAL INFIRMARY.—The annual report of the Macclesfield General Infirmary for the year 1895 shows that 691 in-patients were admitted, of whom 111 were accident cases. There were in addition 730 home-patients treated and 1867 out-patients. Among the in-patients there were 41 deaths and among the other classes 29 deaths. On Dec. 31st, 1895, there were 51 in-patients under treatment. The income for 1895 was £2955 and the expenditure £2826, leaving a balance of £129 in hand.

FOREIGN UNIVERSITY INTELLIGENCE.—*Heidelberg:* Dr. Passow, Assistant to Professor Trautmann in the Ear Department of the Berlin Charité, has been appointed Extraordinary Professor of Otology in succession to Dr. Moos.—*Lausanne:* Dr. Louis Secretan has been appointed Extraordinary Professor of Otology and Laryngology.—*Lille:* Dr. Combemale has been appointed Professor of Clinical Medicine; Dr. Curtis, Professor of Pathology and Pathological Anatomy; and Dr. Laguesse, Professor of Histology.—*Turieff (Dorpat):* Dr. W. Kurchinski of Kieff has been appointed Extraordinary Professor of Physiology.

THE PORTSMOUTH WATER-SUPPLY.—The proposal to take over the undertaking of the Portsmouth Waterworks Company by the Corporation has been little heard of during the last few months, but meanwhile a rather unexpected development has occurred in another direction. The company is promoting a Bill in Parliament for powers to divert a stream and to supply four villages closely adjacent to the present mains. This has evoked much opposition from local bodies, but at a meeting of the shareholders on Thursday, Feb. 20th, a minority successfully opposed the latter part of the scheme. It was argued that the 35,000 houses now being supplied in Portsmouth were increasing at the rate of some 4000 per annum. If the directors had money to spare, said one, let them pay off the arrears of dividends. If they had more water than they knew how to dispose of, let them reduce the prices to the present customers. Ultimately, on the directors undertaking to drop the clauses objected to—viz., as to the extension of the district—in committee of the House of Commons it was unanimously agreed to promote the Bill.

ST. THOMAS'S HOSPITAL.—On Friday, Feb. 21st, the Duke of Connaught, accompanied by the Duchess, visited St. Thomas's Hospital, of which His Royal Highness is the president, to perform the ceremony of reopening two wards—the Beatrice and Florence wards. Mr. J. G. Wainwright, the Treasurer of the Hospital, delivered an address. He recalled former Royal visits to the hospital, notably those of Her Majesty in 1868 and 1871, the occasions respectively of laying the foundation stone of the new hospital and of declaring the same open. He referred to the enormous increase in population, to the financial crisis through which the hospital had passed, and to the modified success which had attended the appeal for £100,000. The actual sum received was £27,000. They had to devote £6000 per annum to pay off debts incurred by rebuilding. The £27,000, however, had enabled them to pay off half the arrears of debt and to open two wards—the "Florence" and "Beatrice"—out of the five closed. His Royal Highness then declared the wards open and referred to the difference between North and South London in the matter of hospital accommodation. The former, with a population of two and a half millions, has 7000 beds; the latter, with a population of one and a half million, has but 926 beds. His Royal Highness concluded with an earnest appeal for subscriptions. The Archbishop of Canterbury offered a prayer and gave a blessing, after which their Royal Highnesses were conducted through the reopened wards.

As we go to press we sincerely regret to learn the death of Mr. Thomas William Thompson, Medical Inspector, Local Government Board.

LITERARY INTELLIGENCE.—We understand that Professor Stewart's new "Manual of Physiology" has proved a success, and that the publishers, Messrs. Baillière, Tindall, and Cox, are reprinting the same edition, the time being too short for the author to prepare a new edition or to make even alterations. This exemplifies the opinion we expressed on the exceptional merits of the book when reviewing it on its first appearance a few weeks since.

PRESENTATIONS TO MEDICAL MEN.—Mr. William Salisbury-Sharpe, L.R.C.P. Lond., M.R.C.S., has been presented by the members of the St. John Ambulance Corps at Paddington Station with a case of surgical instruments, as a recognition of his appreciated instruction in ambulance aid.—Mr. David T. Key, M.R.C.S. Eng., has been the recipient of a silver cigarette case from the Reading corps of the St. John Ambulance Brigade as a token of their regard and esteem.

THE DIFFUSION OF SMALL-POX.—Last week, for the sixth successive week, there was no death from small-pox registered in London, nor was any death from that malady registered in any of the other thirty-two great towns. In London the admissions to the hospital ships of the Metropolitan Asylums Board of small-pox cases last week numbered only 5, as compared with 12, 6, and 12 in the three weeks preceding. The patients remaining under treatment on Saturday last were 58 in number, as against 82 and 73 respectively on the corresponding Saturdays of the previous two months. News from Oxford states that no fresh cases have occurred as a result of the infection disseminated from the tramp who, as we have stated, brought the disease into the city a short time back. In Gloucester strenuous efforts are being made by the medical officer of health to nullify the opposition of the anti-vaccinators to the due observance of the Vaccination Laws. The removal of the assizes to Cheltenham, the unanimous resolutions at the recent meeting of medical men in favour of vaccination, and the data even thus far available from the present small-pox epidemic in the city, ought to have weight in determining the guardians to do all in their power to secure that persons exposed to small-pox infection shall be either vaccinated or revaccinated as they may require. Dr. Bond is leaving no stone unturned in his praiseworthy attempts to save the town from the results of previous ineptitude. In South Wales a further case of small-pox has been recorded at Aberavon, the sufferer being a travelling sweep from Pontypridd, whose illness was diagnosed by a police inspector at the station to which the man had gone on not feeling well. He was at once removed to the infectious hospital, and the lodging-house where he slept on the preceding night was thoroughly disinfected. Another case, making the ninth, has occurred at Swansea, the patient having come to Port Tennant from Gloucester. At Pontypridd a tramp has been admitted to the hospital within the workhouse walls he having developed small-pox whilst in the workhouse on the preceding night. It is believed that he came from Tredegar, and he admits having slept in a lodging-house in Pontypridd on the night before going to the workhouse. The advisability of isolating the man within the walls of the building seems very questionable, but the authorities may possibly have had no choice in the matter. A man who left a lodging-house in Llanelly last week has been notified to the medical officer of health as having fallen ill of small-pox soon after leaving the town, consequently the house that he lately sojourned in has been fumigated as a precautionary measure. Last week there were 2 fresh cases of small-pox notified in the workhouse at Cardiff, making 20 in all that have been removed from the institution, all of them males. Of the 200 inmates, only some 70 have submitted themselves to revaccination, and not one of the revaccinated has taken the disease. A fresh case also occurred in the town, the father of the patient being a mason who had been working at the infected workhouse. At Brynmawr the tenant of the lodging house from which a family had been removed to be placed in quarantine on account of small-pox in one of their number, has now contracted the disease. He has been isolated with the members of the other family, but further cases are, in these circumstances, not unlikely to occur. It has been agreed to erect temporary means of treatment near the isolated quarantine building. A case has been reported to the Bedwellty guardians as having arisen at Blackwood in the person of a tramp from Pontypridd, who was housed in a common lodging in the place. At Dowlais another case has been recorded. Of the 11 patients removed from the vessel *North Cambria* and isolated in Limerick Workhouse most are natives of Wales and two have been discharged as fully convalescent. At the end of the second week of February only 3 small-pox patients remained under treatment in hospital in Dublin.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—A supplementary circular to that which we published in THE LANCET of Feb. 15th, referring to the next general meeting of this association, states that the papers will be read at 4 P.M. in the Pathological Laboratory of the New Museums, Cambridge, and *not at the hotel*. The council meeting will be held at the University Arms at 2 P.M., as previously announced, and arrangements will be made to conduct over the colleges next morning those members who are staying at Cambridge for the night.

THE JOURNEYINGS OF A SCARLET FEVER CASE.—The Leatherhead Urban Council is unable to get any further in a case which certainly merited all the investigation it has received. There had been an outbreak of scarlet fever at the St. John's Foundation School, but when the school reopened after the Christmas holidays this had entirely subsided. On Dec. 30th, 1895, a lad travelled to Leatherhead from Stoke-upon-Trent, and on going before the resident medical officer on admission was found to be suffering from the disease, which had actually reached the peeling stage. Prompt measures were taken; the authorities removed the patient to the Cheam Infectious Hospital without his having actually entered the school, and the London and South-Western Railway Company put the whole train in which he journeyed out of use and under disinfection. The boy had been laid up with what had been called influenza in the holidays, and actually brought with him, it was reported, a certificate of immunity from infectious trouble signed by two medical men. The railway company has been considering the issue of proceedings, and offered their assistance to the sanitary authority in a like step, but were advised that the by-law (16) dealing with the matter applied only to a person who had charge of a traveller suffering from infectious disease while on the premises of the company. They suggested, therefore, that the Leatherhead authorities should first, and subsequently the Stoke Council, take up the matter with a view to the litigation mentioned under the Public Health Act, 1895, Section 126. The clerk to the Leatherhead Council pointed out that this section was directed against "any person who, while suffering from any infectious disorder, wilfully exposes himself without proper precaution against the spread of such disorder, or in public conveyances," &c., and advised that the attempt to obtain a judgment under such a section would prove futile. The council gave no instruction in the matter.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Food Products Adulteration.

THE Select Committee on this subject has been reappointed, the terms of the reference being "to inquire into the working of the Margarine Act, 1887, and the Sale of Food and Drugs Act, 1875, and any Acts amending the same, and report whether any, and if so, what amendments of the law relating to adulteration are in their opinion desirable."

Diseases of Animals Act.

The Bill introduced by the Government amending this Act makes permanent the existing regulations of the Board of Agriculture as to the importation of diseased cattle from abroad—that is to say, it requires all imported cattle to be slaughtered at the port of entry. In introducing the Bill, the President of the Board of Agriculture quoted figures to show that while the regulations have not had the effect of increasing the price of meat, they have been of enormous value in protecting from disease the flocks and herds of this country.

Law of Public Health in Scotland.

The Government, fulfilling the promise made in the Queen's Speech at the beginning of the Session, has introduced a Bill amending and extending the Law of Public Health in Scotland, and in order that

progress may at once be made with the measure it has introduced it in the House of Lords. The intention of the Government is, after getting this amending Bill through, to bring forward a consolidation bill, which shall bring into one statute all the provisions of the law with regard to Public Health in Scotland. The Bill introduced deals, among other things, with the definition of statutory nuisances, extending it so as to include nuisances "dangerous" to public health, it gives local authorities power to trace milk supplies to their source, it makes general to the country a number of building regulations now confined to the larger burghs, and in several other respects advances the law of public health.

HOUSE OF COMMONS.

THURSDAY, FEB. 20TH.

Treatment of Lunatics in Ireland.

Mr. Gerald Balfour, Chief Secretary for Ireland, said, in reply to a question, that the subject of the admission and treatment of inmates in workhouses in Ireland engaged his careful attention during the recess in connexion with the general question of workhouse administration in Ireland. It was true that in some workhouses harmless epileptics were sent to the lunatic wards, and the Local Government Board often pointed out to guardians that this was not a desirable arrangement. It had been frequently explained in answer to questions in the House that destitute persons of unsound mind were sent to Irish workhouses without either legal warrant or committal, and if unable to take care of themselves they were detained and not allowed to take their discharge. Restraint was only employed in workhouses, as in all civil hospitals, by order of the responsible medical officer, who directed that it should be imposed when he deemed it necessary for the safety of the patient or those about him. The Local Government Board had, however, always advised guardians that when a lunatic in a workhouse was so violent as to require restraint the guardians should endeavour to have him or her committed to the asylum. He might add that the Government had under consideration the introduction of a Bill for facilitating amalgamation of workhouses and for making better provision for certain classes of the destitute poor in Ireland.

Miners' Nystagmus.

Mr. Drage asked the Secretary of State for the Home Department whether he will consider the desirability of an official investigation into the cause of miners' nystagmus and the best means of preventing that disease.—Sir M. White Ridley replied: I am not prepared to institute any general inquiry into the causes of miners' nystagmus. I understand that the hon. member's view is that this disease is frequently caused by defective safety lamps, and if he will bring to my notice any cases of nystagmus which are supposed to be due to this cause I will have inquiries made. This can be done in the first instance by the inspector of the district, and if necessary a medical man can be consulted.

FRIDAY, FEB. 21ST.

Enteric Fever in Dublin Barracks.

Mr. Brodrick, replying to a question put by Mr. Hulse, said he regretted that several cases of enteric fever, of which three had proved fatal, had occurred among the cavalry stationed at Island Bridge Barracks, Dublin. Immediately this outbreak of disease was known at the War Office steps were taken to ascertain the cause. Careful investigation was made locally, Sir Charles Cameron made a searching inquiry, and a sanitary expert was sent over from London. All improvements represented by the experts to be immediately desirable were at once ordered to be carried out, and the Secretary of State for War was considering whether, in view of the facts disclosed, it might not be expedient to find some other site for the barracks rather than spend a large sum in improving their condition.

Teaching University for London.

Mr. W. F. D. Smith asked the Vice-President of the Committee of Council on Education whether the Government intend taking any steps with regard to a Teaching University for London during the present session.—Sir John Gorst replied that the subject is under consideration, and it is hoped that an early decision will be arrived at as to the steps which it is expedient to take.

The Flash-point of Mineral Oils.

Sir M. White Ridley, answering a question on this subject put by Mr. Tully, said that he was not aware that the law in America with regard to the sale of these oils was that producers were not allowed to sell to consumers in the United States paraffin oil with a flash-point under 95° or 100° F., while they could ship to this country oil with a flash-point of 73° F. and under. In fact, he was advised that the law as to flash-point varied in nearly every state, and that in some states there was no law at all. To prohibit the importation of petroleum with a flash-point of less than 95° or 100° would be prohibitive of mineral spirit which was required in many industries; but the question of whether any amendment of the law in regard to flash-point was desirable was one that would doubtless be carefully considered by the Select Committee of this House.

MONDAY, FEB. 24TH.

Army Medical Department.

Dr. Farquharson asked the Under Secretary of State for War whether there will be a vacancy shortly in the Director Generalship of the Army Medical Department, and whether it is true, as rumoured, that it is the intention of the War Office not to appoint the senior officer of the department as successor to Sir William M'Kinnon.—Mr. Brodrick replied: There will in a few months be a vacancy in the post of Director-General of the Army Medical Department. Selection for appointments of this nature is made subject to the approval of Her Majesty by the Secretary of State after considering the recommendation of the Army Board. The name of the officer selected will shortly be made public.—Dr. Tanner asked the Under Secretary of State for War whether there has been any falling off of candidates for commissions in the Army Medical Department; if so, what is considered the cause; whether the same result occurs in connexion with candidates for the Indian Medical Service; and what were the numbers presenting themselves for examination in these Services respectively for the past three years.—Mr. Brodrick replied that in proportion to the vacancies offered for competition there was a falling off in the number of candidates in 1895 as compared with 1893 and 1894. The same result occurred, though in a less degree, for the Indian Medical Service. The candidates during the last three years have been for the Army Medical Staff: 59 for 25 vacancies, 51 for 22 vacancies, and 40 for 27 vacancies; for the Indian Medical Service: 63 for 27 vacancies, 69 for 28 vacancies, and 70 for 34 vacancies. The causes of this diminution are engaging the serious consideration of the Secretary of State, and I hope to be in a position to make a statement upon the subject in introducing the Army Estimates.

Infectious Disease Notification.

Mr. Chaplin, in reply to a question by Sir John Brunner, said that the Infectious Disease Notification Act, 1889, has been adopted in 814 urban districts, 585 rural districts, and 38 port districts. Compulsory notification is also in force throughout London under the Public Health (London) Act, 1891, and in 49 towns under provisions in local Acts. The population, according to the last census, of the districts in which notification is compulsory, is 27,220,000, out of a total population of 29,000,000. The question as to the advisability of making the Act of 1889 compulsory has been considered by me, but I think that the Act is much more likely to be enforced when it is voluntarily adopted by a local authority than when it is made applicable to a district without the concurrence of the authority. There are now 202 urban and 94 rural districts, including districts which have recently been constituted, in which the Act is not yet in operation. I am proposing to communicate with the authorities of these districts, and I hope that the number of districts in which the Act is not in force will be considerably diminished in the course of the present year.

Work in Cotton Factories.

Sir Matthew White Ridley, in reply to a question by Mr. George Whiteley, said he proposed to appoint a committee of three experts to inquire into the working of the Cotton Cloth Factories Act, 1889, and into the whole question of steaming and the introduction of artificial moisture into cotton-weaving factories.

TUESDAY, FEB. 25TH.

New Boot for the Army.

Mr. Powell Williams, in reply to a question on this subject, said the various experimental patterns of boots had for several months past been under practical trial, but until some pattern had stood a thorough and conclusive test, it would be premature to adopt it for the troops. No undue delay would occur in the selection of a new pattern.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BLAKER, P. L., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

BANNATYNE, GILBERT A., M.B. Glasg., M.R.C.P. Edin., has been appointed Honorary Physician to the Royal United Hospital, Bath, vice Dr. Biddlecombe, resigned.

BANTOCK, GRANVILLE, M.D., F.R.C.S. Edin., Senior Surgeon to the Samaritan Free Hospital, London, has been elected on the Consulting Staff.

BOWKER, GEORGE E., M.B., C.M. Edin., has been appointed Honorary Assistant Physician to the Royal United Hospital, Bath.

BRAKENRIDGE, F. J., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

CAMPBELL, JOHN, M.A., M.D., M.Ch., M.A.O. Irel., F.R.C.S. Eng., has been appointed Assistant Physician to the Belfast Maternity Hospital, vice R. Strafford Smith, resigned.

COADY, D. P., F.R.C.S.I., has been appointed Medical Officer to the Naas Infirmary.

CONFORD, G. J., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

COOK, H. G. G., M.D. Lond., B.S., F.R.C.S., L.R.C.P., has been appointed Honorary Assistant Surgeon to the Cardiff Infirmary.

COTTERIL, J. M., M.B., C.M., F.R.C.S. Edin., has been appointed an Examiner in Clinical Surgery in the University of Edinburgh.

CROUCH, H. C., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

DAWNAY, A. H. P., L.R.C.P., M.R.C.S., has been appointed Senior Ophthalmic House Surgeon to St. Thomas's Hospital.

DIXON, W. E., B.Sc. Lond., L.R.C.P., M.R.C.S., has been reappointed Resident House Physician to St. Thomas's Hospital.

DOBIE, WM. MURRAY, M.D. Edin., M.R.C.S., has been appointed Honorary Consulting Physician to the Wrexham Infirmary.

DUNCAN, J., M.D., F.R.C.S. Edin., F.R.S.E., has been appointed an Examiner in Clinical Surgery in the University of Edinburgh.

DYBALL, B., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

ELDER, GEO., M.B., C.M., M.R.C.P. Edin., has been appointed Medical Officer in the Dispensary Department of the Leith Hospital.

EVANS, FREDK., M.D., C.M. Aberd., M.R.C.S., has been appointed Honorary Physician to the Cardiff Infirmary, vice F. Evans.

FARQUHARSON, J. MALCOLM, M.B., C.M. Edin., has been appointed Surgeon to the Eye, Ear and Throat Infirmary of Edinburgh.

FISHER, J. HERBERT, M.B., B.S. Lond. Univ., F.R.C.S. Eng., has been appointed Assistant Ophthalmic Surgeon to St. Thomas's Hospital.

FOWLER, JAS. S., M.B., C.M. Edin., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer in the Dispensary Department of the Leith Hospital.

FRAZER, W. D., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

GENGE, G. G., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

GRIFFITHS, P. R., M.B., B.S. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Cardiff Infirmary, vice Hardyman.

HALL, JOSEPH PERCY, M.B., Ch.B. Vict., M.R.C.S., L.R.C.P., has been appointed Junior House Surgeon to the Salford Royal Hospital, vice John Ray.

HANNAH, NATHAN, L.R.C.P. Edin., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for a period of three years to the Abram District Council, Lancashire.

HARCOURT, G. R., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

HART, D. R., M.D., F.R.C.P. Edin., has been appointed Physician to the Leith Hospital.

HICHENS, P. S., M.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed Non-resident House Physician to St. Thomas's Hospital.

KENT, P. W., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

KNOCKER, W. D., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

LANGWILL, H. G., M.B., M.R.C.P. Edin., has been appointed Physician to the Leith Hospital.

MILES, ALEX., M.D., F.R.C.S. Edin., has been appointed Medical Officer to the Leith Hospital.

PAGE, FRED., M.D. Edin., M.R.C.S., has been appointed an Examiner in Clinical Surgery in the University of Edinburgh.

PALIN, E. W., L.R.C.P., M.R.C.S., M.A., M.B., B.Ch. Oxon., has been appointed Non-resident House Physician to St. Thomas's Hospital.

PATERSON, W. H. J., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

PRAIN, J. L., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

RAY, JOHN HOWSON, M.B., Ch.B. Vict., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Salford Royal Hospital, vice Ernest Knight, resigned.

RENSHAW, J. A. KNOWLES, M.B., C.M., M.A., Cantab., L.S.A. Lond., has been appointed House Surgeon to the Manchester Royal Infirmary.

SAUNDERS, E. A., M.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed Junior Ophthalmic House Surgeon to St. Thomas's Hospital.

SECCOMBE, P. J. A., M.A. Cantab., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Electrical Department of St. Thomas's Hospital.

SHENNAN, THEODORE, M.D., C.M. Edin., has been appointed Pathologist to the Leith Hospital.

SIM, W. G., F.R.C.S. Edin., has been appointed Ophthalmic Surgeon to the Leith Hospital.

SKIRVING, A. SCOT, M.B., C.M. Edin., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer in the Dispensary Department of the Leith Hospital.

SMITH, J., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

STONHAM, CHARLES, F.R.C.S.E., has been appointed Surgeon to the Westminster Hospital, vice George Cowell, resigned.

STRANGE, R. G., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

TAYLOR, A. E., M.B., C.M. Edin., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Honorary Assistant Physician to the Cardiff Infirmary.

TAYLOR, JAMES, F.R.C.S.E., has been appointed Honorary Consulting Surgeon to the Wrexham Infirmary.

TAYLOR, WM., M.D. Edin., L.R.C.P. Edin., M.R.C.S., has been appointed Honorary Consulting Physician to the Cardiff Infirmary.

THORNELY, W., B.A. Cantab., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

THORNTON, F. B., L.R.C.P., M.R.C.S., has been reappointed Resident House Physician to St. Thomas's Hospital.

TURNER, WILLIAM, M.B., F.R.C.S., L.R.C.P., has been appointed one of the Visiting Surgeons to the Seamen's Hospital in the Royal Victoria and Albert Docks, which is a Branch of the Seamen's Hospital Society (*Dreadnought*), at Greenwich.

WALLACE, L. A. R., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

WATKINS, BERNARD VINCENT, M.B., Ch.B. Vict., M.R.C.S. Eng., and L.R.C.P. Lond., has been appointed House Surgeon to the Manchester Royal Infirmary.

WILSON, C. W. GRANT, L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Birmingham.—Assistant House Surgeon. Salary £50 per annum, with apartments and board.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN, Steelhouse-lane, Birmingham.—Extra Acting Surgeon for one year.

BOLTON INFIRMARY AND DISPENSARY.—Senior and Junior House Surgeons for one year. Salary for the Senior £120, and for the Junior £80 per annum, with apartments, board, and attendance.

BOSCOMBE HOSPITAL, Shelley-road, Boscombe, Bournemouth.—House Surgeon, unmarried. Salary £80, with board (exclusive of wine or beer), lodging, and washing.

BRISTOL GENERAL HOSPITAL.—House Surgeon for three years. Salary £120 per annum, board, residence, &c., provided in the house.

BURTON-ON-TRENT INFIRMARY.—House Surgeon. Salary £130 per annum, with prospective advantages, also coals and gas.

CHELSEA HOSPITAL FOR WOMEN, FULHAM-ROAD, S.W.—Resident Medical Officer for twelve months. Salary £60 per annum, with board, lodging, and washing.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

CORNWALL COUNTY LUNATIC ASYLUM, Bodmin.—Junior Assistant Medical Officer. Salary £100 a year, increasing £10 yearly to £120 a year, with board, lodging, &c.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's-buildings, Holborn, E.C.—Honorary Physician.

GENERAL HOSPITAL, Nottingham.—Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided. Also Assistant House Physician for six months. Board, lodging, and washing in the hospital provided.

GREENWICH UNION INFIRMARY.—Second Assistant Medical Officer, unmarried. Salary £80 per annum, with board, lodging, washing, and attendance in the infirmary, and twopence per day in lieu of beer. Applications to the Clerk to the Guardians, Union Offices, Greenwich.

MANCHESTER ROYAL INFIRMARY (BARNES CONVALESCENT HOSPITAL), Cheadle.—Clinical Assistant for six months. Board and lodging provided. Applications to the Chairman of the Medical Board, Royal Infirmary, Manchester.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House Surgeon. Honorarium at the rate of £50 per annum, and board.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer, for the North-Western Fever Hospital, Haverstock-hill, N.W. Unmarried. Salary £160 the first year, £180 the second year, and £200 the third and subsequent years of service, with board, lodging, attendance, and washing. Applications to the Clerk to the Board, Norfolk-street, Strand, W.C.

POPLAR HOSPITAL FOR ACCIDENTS, Blackwall, E.—Honorary Surgeon.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House Surgeon. Board, residence, and laundry provided.

SHEFFIELD ROYAL HOSPITAL.—Six Honorary Dental Surgeons.

ST. PETER'S HOSPITAL, Henrietta-street, Covent-garden, London, W.C.—House Surgeon for six months. Salary at the rate of £100 a year, with board, lodging, and washing.

SUNDERLAND AND NORTH DURHAM EYE INFIRMARY, Sunderland.—House Surgeon. Salary at the rate of £80 a year, out-door, rising to £90 after six months.

THE DENTAL HOSPITAL OF LONDON, Leicester-square, W.C.—Assistant Anæsthetist.

THE HOSPITAL FOR WOMEN, Soho-square, London.—Assistant House Physician (non-resident) for three months.

NORTHUMBERLAND COUNTY LUNATIC ASYLUM, Morpeth.—Assistant Medical Officer, unmarried. Salary £120 per annum, increasing £10 yearly to £150, with furnished apartments, board, and lodging.

VICTORIA HOSPITAL, Folkestone.—House Surgeon. Salary £80 a year, rising £10 annually, with board, residence, and washing.

WEST SUSSEX ASYLUM.—Medical Superintendent. Salary £450 a year, with unfurnished house (the committee paying rates and taxes), light, washing, coals and vegetables. Applications to the Clerk to the Committee, West Pallant, Chichester, Sussex.

Births, Marriages, and Deaths.

BIRTHS.

ALEXANDER.—On Feb. 24th, at Faversham, the wife of Sydney R. Alexander, M.D. Lond., of a daughter.

BEVERLEY.—On Sunday, Feb. 23rd, 1896, at 13, Albion-road, Scarborough, the wife of W. H. Beverley, F.R.C.S. Edin., M.R.C.S. Eng., L.R.C.P. Lond., of a son.

PRESTON.—On Feb. 18th, at Portsdown-road, W., the wife of Theodore J. Preston, Fleet Surgeon R.N., of a son.

QUILL.—On Feb. 19th, at Rochester, the wife of Surgeon-Lieutenant-Colonel R. H. Quill, A.M.S., of a son.

REVELL.—On Feb. 27th, at 11, Granville-road, Southfields, Wandsworth, S.W., the wife of Hugh Stanley Revell, of a daughter.

RUFFER.—On Feb. 22nd, at York-terrace, London, N.W., the wife of Dr. M. Armand Ruffer, of a daughter.

SCOTT.—On Feb. 20th, at German-place, Brighton, the wife of Alfred Scott, M.R.C.S., of a daughter.

SMYTH.—On Feb. 24th, at Adelaide-road, Brockley, S.E., the wife of F. Sydney Smyth, F.R.C.S. Edin., of a daughter.

SUTTON.—On Feb. 19th, at Sidcup, the wife of C. R. Arnold Sutton, M.A., M.D. Cantab., of a son.

MARRIAGES.

CROUCH—SMITH.—On Feb. 18th, at St. Thomas's Church, Portman-square, by the Rev. Canon Page-Roberts and the Ven. Archdeacon Smith (uncle of the bride), Charles Percival Crouch, F.R.C.S. Eng., M.B. Lond., of Weston-super-Mare, to Annie Parbury, second daughter of Thomas Smith, F.R.C.S. Eng., of Stratford-place, W.

DEATHS.

ILOTT.—On Feb. 21st, at Beechfield, Bromley, Kent, James William Ilott, M.R.C.S., L.S.A., aged 80.

LAWSON.—On Feb. 22nd, at Mayfield-terrace, Edinburgh, Robert Lawson, M.D. Edin., F.R.S.E., Deputy-Commissioner in Lunacy.

LYNCH.—On Feb. 19th, at Sudbury, Suffolk, John Cox Lynch, surgeon, aged 69.

WEBB.—On Feb. 22nd, at Gloucester, Charles Louis Webb, M.R.C.S. Eng., L.S.A. Lond., aged 44.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (1 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.) Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (4th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (5th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (7th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (2nd).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Paper:—Dr. H. W. Marett Tims: The Origin of the Mammalian Teeth. Casual Communications:—Mr. Storer Bennett: An interesting point in the Treatment of Dental Irregularities.—Mr. C. D. Davis: An Artificial Nose attached by a Plate in the Palate.—Mr. G. Brunton: Some Experiments in Colouring Porcelain for Teeth and Gum Body.—Mr. E. Blain: A few Specimens of Dr. Martin's "Prothese Immediate."

SOCIETY OF ARTS.—8 P.M. Professor J. M. Thomson: The Chemistry of certain Metals and their Compounds used in Building, and the Changes produced in them by Air, Moisture, and Noxious Gases, &c. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. W. Watson Cheyne: The Objects and Limits of Operations for Cancer. (Lettsomian Lecture.)

TUESDAY (3rd).—SOCIETY OF ARTS.—8 P.M. Mr. G. Scott Elliot: The Commercial Prospects of English East Africa, and British Central Africa.

PATHOLOGICAL SOCIETY OF LONDON.—Papers:—Mr. J. H. Morgan: Malignant Tumour of Spermatic Cord.—Dr. Pitchford: Concretion in a Galactocele.—Mr. H. B. Robinson: (1) Diffuse Cystic Disease of Both Breasts; (2) Syphilitic Testis in a New-born Infant.—Dr. Snow: Insidious Marrow Infection in Mammary Carcinoma.—Dr. Hunter: Three Cases of Ulcerative Appendicitis. Card Specimens:—Dr. Parkes Weber: (1) Sarcoma of Both Kidneys of a Child; (2) Localised Fatty Change in Liver.—Mr. H. B. Robinson: Lymphangioma in Parotid Region.—Dr. Hunter: (1) Pyæmic Abscess of Liver: (2) Cancerous Thrombosis of Portal Veins.—Dr. Walsham: Tuberculous Ulceration of the Ileum with Perforation.

WEDNESDAY (4th).—BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (Limmer's Hotel, Conduit-street, W.).—3 P.M. Dr. H. McClure (Cromer): Some Factors in our Atmospheric Environment and their Relation to Health.—Dr. D. Kerr (Bath): Modern Improvements in British Balneological Practice.

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens by Dr. Amand Routh, Dr. Galabin, and others. Adjourned Discussion on Mr. Harrison Cripp's paper on Abdominal Hysterectomy with Intraperitoneal Treatment of the Stump, with Notes of Eight Cases. Mr. Alban Doran: Cases of Fibroma of the Ovary and Ovarian Ligament removed by Operation, with a Series of After-histories of Cases reported in the "Transactions" since 1879.

SOCIETY OF ARTS.—8 P.M. Mr. A. A. C. Swinton: Roentgen's Photography of the Invisible.

THURSDAY (5th).—HARVEIAN SOCIETY (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 P.M. Clinical Evening.

FRIDAY (6th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich).—8.15 P.M. Clirical Evening:—Cases, Specimens, &c., by the President (Mr. E. Clarke), Drs. Collie, Henry, Joscelyne, and others.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, W.).—8.30 P.M. Clinical Evening. Dr. Chapman: (1) Sporadic Cretinism; (2) Multiple Lipomata.—Mr. S. Edwards: (1) Nephrorraphy; (2) Nephrolithotomy.—Dr. Sutherland: (1) Braised Skin; (2) General Paralysis; (3) Supernumerary Nipple.—Mr. Keetley: Radical Cure of Hernia; (2) Wiring separated External Condyle.—Dr. A. L. Scott: Cardiac Bruit.—Mr. L. A. Bidwell: Salivary Fistula; (2) Gummata of Arms.

SATURDAY (7th).—MEDICAL SOCIETY OF LONDON.—7 P.M. Anniversary Dinner at the Whitehall Rooms, Hôtel Métropole.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (2nd).—LONDON POST-GRADUATE COURSE.—Roy. Lond. Ophthalmic Hospital, Moorfields, 1 P.M., Mr. A. S. Morton: Affections of Eyelids.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. Stoker: Impaired Movement of the Vocal Cords.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

TUESDAY (3rd).—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Alcoholic Insanity, Insanity with Syphilis, Insanity with Organic Brain Disease.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The External Covering of Plants and Animals: its Structure and Functions.

WEDNESDAY (4th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M. Dr. H. Mackenzie: Tubercular Cavities.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Adenoma Sebaceum.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Turner: Neurological Cases.

LONDON POST-GRADUATE COURSE.—Roy. Lond. Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. S. Morton: Retinal Affections.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Psoriasis.

THURSDAY (5th).—ROYAL INSTITUTION.—3 P.M. Rev. W. Barry: Masters of Modern Thought—Voltaire.

LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. Hale White: Clinical Lecture.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M. Dr. Allan Macfadyen and Mr. A. G. Foulerton: Qualitative Tests for Sugar and Acetone in Urine.

FRIDAY (6th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Actinomycosis and Glanders.

ROYAL INSTITUTION.—9 P.M. Mr. A. R. Binnie: The Tunnel under the Thames at Blackwall.

SATURDAY (7th).—ROYAL INSTITUTION.—3 P.M. Lord Rayleigh: Light.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Neuroses of the Skin.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second half-yearly volume for 1895 was given in the issue of Dec. 28th. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1895 are now ready. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*.; by post, 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

CYCLING AND HÆMORRHOIDS.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to ask through the columns of THE LANCET whether patients suffering from hæmorrhoids or varicose veins of the legs, or both, should be advised to refrain from cycling?

I am, Sirs, yours faithfully,

Feb. 25th, 1896. GENERAL PRACTITIONER.

Spencer.—It is our rule, to which we can make no exceptions, never to recommend individual practitioners.

"THE LANCET" COMMISSION ON DANGEROUS PARAFFIN LAMPS."

WE have received the following letter:—

"Bogindollo, Forfar, N.B., 5 Feby., 1896.

"DEAR SIRS,—I glanced over your article on paraffin lamps but with its conclusions I do not agree. I enclose a cutting from *Food and Sanitation* in which you will see that the blame of all accidents is thrown on the dangerous oils brought to this country from America. I, myself, have tested paraffin by dipping lighted matches into it but in every case the match was extinguished. The article inclosed will show you that before the inquiry is complete your Commissioners will have to examine the oils used, particularly in England. It will not do to take for granted that the oils are safe because there has been some legislation on the subject.

"I am, yours truly,

"The Editors of THE LANCET. "D. KYDD, M.D."

We did not consider that anything was to be gained by printing the above, but contented ourselves with making the following reply:—

"Dr. Kydd of Forfar, N.B., does not agree with the conclusions of this Commission. He thinks the American oils are at fault, and supports his contention by adding that he has tested paraffin by dipping lighted matches into it, but in every case the match was extinguished!"

Upon this we have received the following letter:—

"Bogindollo, Forfar, N.B., 18 Feby., 1896.

"SIRS,—I got your paper containing the *garbled* extract of my letter to you. I would have expected more honesty from a paper of your *supposed* standing, but you are apparently stuffed with conceit of your own Commission. I should have thought the article I sent you might have carried some weight, but your *garbled extract* gives my letter a different meaning altogether.

"Yours, without respect,

"D. KYDD, M.D."

We are quite unable to see where we have wronged Dr. Kydd or what "garbling" has taken place. Perhaps if Dr. Kydd had obtained more familiarity with our work on the whole subject than was to be gained by "glancing over an article on paraffin lamps" he would have written more clearly, for what he meant, if our interpretation of his words was incorrect, we are quite at a loss to imagine.

A QUESTION OF ETHICS.

To the Editors of THE LANCET.

SIRS,—During K.'s absence from home in September, 1891, C. was sent for by a patient of his, a Mrs. G., and attended her until K.'s return, when C. submitted a list of the attendances, &c., to K. and gave up the case to him. K. in reply thanked C. for his "kindness in seeing Mrs. G.," and added that he "would not forget the matter of fees." Nothing more was heard from K., and C., hearing incidentally that the account had been paid, wrote a courteous letter to K. reminding him of the fact. Two months elapsed without a reply, and C., thinking that possibly the letter might have miscarried, sent a copy of the first letter by a messenger that could be trusted. K. has not replied to this. In consideration of such facts, what ought to be the future attitude of C. and others towards K.? C. has K.'s letter, and through a fortuitous circumstance has the very receipt given by K., and dated 26/2/92, covering the attendance during the time from Dec. 4th, 1890, to Dec. 24th, 1891. It is obvious that such a debt is more of the nature of a debt of honour than an ordinary one, which can be sent in occasionally as "account rendered." Moreover, K. no doubt does not know that C. was requested to continue his attendance, but *declined* as Mrs. G. was not his patient and he was merely acting as K.'s substitute. In this C. acted honourably. Has K. done so?

I am, Sirs, yours truly,

Feb. 24th, 1896. DIVREY EMETH.

*** It is difficult to understand K.'s behaviour or to justify it. K. should have offered to share the fees for attending Mrs. G. in his absence with C., especially after promising to do so. His failure to answer the letters is inexplicable. And until it is explained or regretted it is not easy to see how C. can resume neighbourly and friendly relations with him.—ED. L.

WHAT IS PUERPERAL FEVER?

To the Editors of THE LANCET.

SIRS,—Can you tell me the definition of "puerperal fever," i.e., the kind of fever after parturition which a medical man ought to certify as such to the local authority under the Infectious Diseases Notification Act? I am, Sirs, yours truly,

Chatham House, Rotherham. WM. A. GARRARD.

*** It must be left for each man to judge for himself whether or not a case comes within what he has been educated to regard as "puerperal fever." There must be cases where a conscientious man anxious to do his duty will be uncertain how to act; on the other hand, there will be cases where there can be no question as to his duty—for instance, if he should have a series of cases in his practice when other medical men in the same district have none.—ED. L.

A RECOGNISED SCALE OF CHARGES.

To the Editors of THE LANCET.

SIRS,—I shall feel very much obliged if you will let me know if there is any recognised scale of charges for surgical and gynæcological operations and attendance in London, or in large towns where there are several surgeons, and, if so, where can I obtain copies? Perhaps you can tell me the usual charges for amputation of the breast, radical cure of hernia, excision of knee, osteotomy for genu valgum, and ovariotomy. I am, Sirs, yours truly,

Feb. 12th, 1896. A. B. C.

*** There is no "recognised" scale of charges for surgical and other operations. Such fees vary with the locality, the means of the patient, and the professional status and experience of the operator, and are a matter of private arrangement between surgeon and patient. A. B. C. had better apply privately to some operating surgeon of his acquaintance for a detailed answer to the second part of his letter.—ED. L.

HEREDITARY ALCOHOLISM.

To the Editors of THE LANCET.

SIRS,—Professor Pellman, of the University of Bonn, is responsible for the following indictment of alcohol as a poison capable of engendering every kind of infamy and degradation among the offspring and descendants of a dipsomaniac. A woman named Ada Yurke, who was born in 1740, died about the commencement of the present century a victim to alcohol, after a life spent in thievery and vagabondage. Out of the 834 persons known to be descended from her Professor Pellman has been able to trace the career of no fewer than 709 individuals. Here are some of the particulars in outline: Born out of wedlock, 106; beggars, 142; pensioners of mendicity institutions, 64; prostitutes, 181; gaol-birds, 76, including 7 murderers. In seventy-five years these victims of alcohol have cost the state, in relief, prison charges, and damages, a sum calculated at upwards of 5,000,000 marks. Drink is, no doubt, blamable for many evils, but according to Professor Pellman's remarkable investigation it cannot be accused of diminishing the fecundity of the human species. On the contrary, from the data he affords it would seem as though the habitual consumption of alcohol in excessive quantities were capable of stimulating philoprogenitiveness to an alarming extent. I am inclined to think that a progeny numbering 834 adults in the space of 150 years, or thereabouts, is considerably above the average amongst non-alcoholic ancestors.—I am, Sirs, yours faithfully,

Feb. 24th, 1896. SCEPTICAL.

T. H.—We cannot publish our correspondent's very long letter. With some of what he says we are in accord, but the standard is, in our opinion, not too high, and the publication of a letter founded on that assumption would serve no good purpose.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 27th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo	Maximum Temp Shade	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 21	29·71	S.W.	49	48	52	49	48	0·04	Raining
" 22	29·95	S.E.	38	36	76	46	37	0·09	Bright
" 23	30·29	N.E.	36	34	77	43	32	...	Hazy
" 24	30·45	N.E.	32	31	78	43	30	...	Hazy
" 25	30·33	E.	32	31	60	35	29	...	Overcast
" 26	30·06	N.E.	30	...	53	37	26	...	Overcast
" 27	30·22	N.	37	35	60	42	30	...	Overcast

During the week marked copies of the following newspapers have been received:—*Western Daily Mercury, Buxton Chronicle, Blackburn Telegraph, Cork Constitution, Brighton Gazette, East Anglian Daily Times, Hereford Times, Leamington Spa Courier, Scotsman, Hull Daily News, North British Daily Mail, South Wales Daily News, Yorkshire Post, Birmingham Gazette, Lincolnshire Echo, Newcastle Chronicle, Southport Visitor, Bradford Observer, Times of India, North Star, Leeds Mercury, Freeman's Journal, Pioneer Mail, Western Morning News, Leicester Daily Post, Bristol Mercury, Liverpool Daily Post, Architect, Bath Chronicle, Sanitary Record, Builder, St. Bartholomew's Hospital Journal, Le Courrier de la Presse, Cape Times, Manchester Courier, Dundee Advertiser, Local Government Chronicle, Reading Mercury, Carmarthen Weekly Reporter, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, West Middlesex Standard, Ramsey Courier, Ramsey Weekly News, Mining Journal, Vegetarian, Gloucestershire Chronicle, General Advertiser, Beverley Recorder, Local Government Journal, Boston Guardian, Surrey Advertiser, Christian News, Liverpool Football Echo, Paddington and West London Mercury, County Council Times, Australasia Medical Gazette, Sunderland Herald, Evening Telegraph (Dundee), Rhyl Journal, City Press, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. G. W. Allan, Glasg.; Messrs. E. Austin and Son, Clifton; Ammonal Chemical Co., Lond., Manager of.

B.—Dr. A. G. Bateman, Lond.; Dr. D. Butler, Sydenham; Lt.-Col. E. Browne, Jersey; Rev. W. K. R. Bedford, Lond.; Mr. J. Bellingham, Dunley, Worcestershire; Mr. A. S. Barling, Lancaster; Mr. G. H. Broadbent, Manchester; Mr. J. Barclay, Glasg.; Mr. C. Birchall, Liverpool; Messrs. Bryce and Rumpff, Lond.; Messrs. Blondeau et Cie, Lond.; Messrs. Burgoyne, Burbidges and Co., Lond.; Messrs. C. Barker and Sons, Lond.; Burton-on-Trent Infirmary, Sec. of; Bristol Gen. Hosp., Sec. of; Boscombe Hosp., Sec. of; Board of Works, Poplar, Sec. of.

C.—Dr. J. B. Crozier, Lond.; Mr. G. Cuthbert, Lond.; Mr. S. H. Cowell, Ipswich; Mr. W. W. Cheyne, Lond.; Mr. F. G. Carrington, Gloucester; Mr. H. C. Crouch, Lond.; Messrs. E. Cook and Co., Lond.; Messrs. D. Currie and Co., Lond.; Messrs. Cassell and Co., Lond.; Central London Throat and Ear Hosp., Sec. of; Chelsea Hosp. for Women, Sec. of; Cornwall County Lunatic Asylum, Bodmin, Supt. of.

D.—Messrs. Deacon and Co., Lond.; Messrs. F. A. Davis and Co., Philadelphia; *Daily Argus*, Birmingham, Editor of; Daimler Motor Co., Lond., Sec. of; Detector, Wivenhoe.

E.—Mr. J. F. Elliott, Southampton; Emigration Home for Destitute Girls, Lond., Sec. of; *Engineer*, Lond., Publisher of.

F.—Dr. W. Fraser, Salford; Dr. E. R. Fothergill, Grantham; Dr. E. Fawcett, Bristol; Mr. E. Fawcett, Redlands; Factory Dept., Home Office, Lond., H.M. Chief Inspector.

G.—Dr. A. L. Gillespie, Edin.; Dr. H. Gros, Cambrai, France; Mr. W. L. Goodridge, Lond.; Mrs. Gifford, Chard; Messrs. Green and Williams, Nottingham.

H.—Dr. J. Hitchcock, Fochabers; Dr. L. N. Harding, Buxton-on-the-Water; Mr. C. Heneage, Eastbourne; Mr. O. Holst, Eastbourne; Mr. H. W. Hart, Putney; Mr. Huish, Croydon; Mr. G. P. Helm, Marazion R.S.O.; Messrs. J. Haddon and Co., Lond.

J.—Mr. R. Jones, Liverpool; Mr. W. Jacobson, Lond.; Messrs. W. Johnson and Co., Tonbridge; Jeyes' Sanitary Compounds Co., Lond., Sec. of.

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